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A survey was made of 1730 psychiatric patients who had been discharged into the community. Of the 1730, more were females (697), but disorders among men were more severe. Three groups of cases were identified: the most severe, composed of persons poorly established in the community, most frequently single unskilled males and often diagnosed schizophrenic; the second most severe, composed of persons with personality disorders, often married, whose vocational adjustment was the poorest before illness and still poorer after; and a third group made up of older, better established patients, often depressed, whose subsequent adjustment tended to demonstrate a loss of status. Services for the three groups varied in source and extent. A second study was made of factors influencing the vocational success of 169 severely disturbed as by the criteria above. Vocational counseling and a workshop were provided, but vocational success was limited: approximately one-third worked one-third of the time, one-third worked half-time, and one-third not at all. Nor were symptoms reduced. However, success was shown to be clearly related to measures of cognitive functioning and little related to personality structure. Patterns of social factors revealed that persons whose social adjustment was in equilibrium tended not to change their style and not to work. (JD)

# Factors Influencing Rehabilitation Potential Among the Psychiatrically Disabled

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## Chapter I

### Introduction

The concept of psychiatric disability is familiar to most workers in health, welfare, and rehabilitation agencies. This concept is founded upon the presence of patients with psychiatric diagnoses who are either temporarily or permanently, totally or partially unable to work effectively. The relative weakness of the psychiatric diagnostic system, its absence of actual reference to pathological entities, has in the functional disorders led to many different conceptual systems expressing the basis of the illness. In most explanations of psychiatric illness, vocational disability has been identified as a derivative of the illness, and stands with other symptoms as a component of the patient's symptomatology. Seldom, if ever, has the vocational disability been viewed as a central factor or a part of the underlying pathology. Actually, the underlying pathology has most frequently been thought to be emotional.

Psychiatric treatment has not typically focused upon vocational symptoms. There has tended to be an accepted belief that emotional or dynamic would (must) precede improvement in vocational adjustment. Many patients have not reached the degree of dynamic or emotional recovery necessary to work. In fact, patients with unremitting and disabling symptoms are so common that many professional and non-professional forms of assistance have developed to focus on their needs.

Many people in the community do not see anyone but the employed, and thus see little evidence of psychiatric disability. The professional community, as



we have said, sees a great deal of evidence of psychiatric disability. This is not a discrepancy of numbers, so much as it is a lack of opportunity for most successful, reliable people to cross paths with the persons who are failures and who cause problems in the community. One wonders how persons with severe vocational limitations of psychiatric origin compare in number and in other qualities with the community or with other psychiatric cases.

We are now approaching a period when considerable economic effort and professional skill will be devoted to furthering vocational adjustment of the disabled. Humanitarian motives, Christian ethical principles, and social economics have combined in this effort to change or to rehabilitate the disabled. Clinical experience has directed most efforts. To date, little evidence has been accumulated to define the general problem or to test the effectiveness of particular solutions.

The professional services and individuals now endeavoring to rectify psychiatric vocational disabilities have come to center around the rehabilitation agencies. Workshops, counseling, training, and placement are the common tools of the rehabilitation services for psychiatric clients, although specific programs of treatment differ greatly.

The clients who are offered rehabilitation services are a very heterogeneous lot. In age, diagnosis, and degree of chronic involvement, it is not possible to characterize the group, except to say that all kinds are seen.

We are now faced with evaluating the effectiveness of the treatment efforts that have been offered. This evaluation involves a broad understanding of the personal, historical, and treatment factors associated with recovery from disability.

We have used two general methods to arrive at such an understanding of psychiatric disability. The first has been to survey as large a population of discharged psychiatric patients as possible—to study superficially their characteristics, the services they have received, and their vocational disability. The second approach has been to work intensively with a group of the most severely disabled psychiatric patients. In this latter effort we have studied the factors related to their vocational success, including one specific treatment program.

This report of our efforts is in three parts. The first part is a study of a population of 1730 psychiatric patients who have been discharged into the community. The characteristics of the population are described as well as the services they received after discharge. In addition, a sub-sample of this population has been interviewed and their vocational success reported.

The second part of this report recounts a study of 169 severely disabled patients who were intensively studied and treated. Factors in their lives, psychometric characteristics, and diagnosis are related to their vocational success. This part describes a treatment program aimed at returning these patients to work. The effectiveness of the program is also discussed.

The third part discusses the results and presents our conclusions.

## Chapter II

### A Survey of 1730 Psychiatric Patients

This survey was undertaken to provide basic census data concerning psychiatric hospital discharges who might have vocational problems. A population of all patients who had emotional problems discharged into Hennepin County (including Minneapolis and suburbs) in a vocationally feasible reasonable age range was enumerated. This population was then checked through the public agencies and sampled by interview. The results of this study describe extensively the demographic data, and in a preliminary way, the services received and the vocational success after discharge.

The steps involved in completing this survey were as follows:

1. Defining the patient population,
2. Collecting the demographic data on the population,
3. Analyzing the demographic data,
4. Collecting data from agency files to determine what services were rendered to these patients subsequent to hospital discharge,
5. Analysis of these results,
6. Selection of a sample of patients for interview to determine their vocational and social success, and
7. Analysis of these results.

Each of these operations will be described in succeeding sections of this chapter.

#### Procedures

In order to be included in the study a person had to meet a number of criteria. These criteria are noted by name and also procedurally. The description of procedures has been necessary because such specification is

necessary to define the population exactly.

### Criteria

#### Hospitalization

The person had to have been hospitalized in a psychiatric ward. The determination of the facilities to be surveyed was made on the basis of 1) availability and accessibility of the desired information, 2) the size of a facility's contribution of discharged mental patients to the community, and 3) the willingness of the hospital to cooperate in the survey.

In order to limit the scope of the study, it was decided to gather information from all of the public hospitals responsible for treating psychiatric patients from Hennepin County and from all local private hospitals having psychiatric wards. This decision eliminated the extensive searching for, and the survey of private hospitals in other metropolitan centers where Hennepin County residents might be admitted and treated for psychiatric problems.

The hospitals surveyed were the following eight state mental hospitals: Anoka, Fergus Falls, Hastings, Moose Lake, Rochester, St. Peter, Sandstone and Willmar. The two public hospitals were Minneapolis General Hospital and the University of Minnesota Hospitals. The three local private hospitals were Glenwood Hills Hospital, Fairview Hospital and St. Mary's Hospital.

The pattern for obtaining the lists of persons discharged during the fiscal year 1959-60 from each of the hospitals surveyed was as follows:

1. Daily census sheets from the psychiatric wards of the hospital listing admissions and discharges were obtained by the research staff.

2. Lists were made of all persons and their hospital numbers being discharged for each of the days in the fiscal year 1959-1960 for each of the hospitals. In the case of the state hospital system, this was done through the central office, at the Department of Public Welfare. This list includes persons of all ages, of all diagnoses, with residences in all counties.
3. The next step was to obtain the hospital or clinical charts for each of the persons listed from the daily discharge census sheets, and to make initial judgments regarding the eligibility for inclusion of the patient in the study in terms of age, residence, and diagnosis. The conventions established for inclusion on the criteria of age were that the person was to be included if he were 18 years old at the time of his first discharge in the time period, and that the person was to be included if he were 60 years old at the time of his last discharge in the time period.

The conventions followed in terms of residence were: 1) If the person's address at time of discharge were available and fell within the official Hennepin County list, he was included. 2) If information on residence at discharge were not available, the admission residence was used. 3) If there were information to the effect that a person was discharged to relatives or someone residing outside of Hennepin County, the patient was excluded from the study. 4) If there were information to the effect that the person was transferred to another hospital, the patient was excluded from the study, even though he may have been a resident of Hennepin County.



The convention followed in terms of diagnosis is the same as the criteria used for inclusion in the study. (See below) After eligibility was determined, a detailed data sheet was filled out on each patient using the entire clinic chart as a source for information.

The above outline for the enumeration and accumulation of detailed information was followed in all cases. More than 3,000 hospital charts were surveyed for the purpose of determining eligibility and for gathering detailed information. Since detailed information was not gathered on those persons not to be included in the study, the population surveyed, while representing a significant subgroup, is not representative of the entire population of discharged mental patients for Hennepin County.

#### Time of Discharge Period

The person had to be returning to the community during the fiscal year 1959-60 (July 1, 1959 - June 30, 1960). In all cases where the person had not been committed to the hospital by the court, the date of discharge was used to determine eligibility for inclusion in the study. However, since "discharge" has a specific meaning for the state hospital system, namely, officially releasing a person from custody of the hospital and from the hospital records, the date of "provisional discharge" (time of leaving the hospital) was usually the date used for determining eligibility for inclusion in the study. No persons transferred directly to another hospital were included.

#### Residence

The person had to be a resident of Hennepin County at the time of his leaving the hospital for return to the community. In many cases this was not easily determined from the hospital charts because the most accurate information available was on the admission face sheet of the clinic charts.

Consequently, this data had to be used for determination of eligibility for inclusion in the study. Except when stated otherwise in the record, the assumption was made that the discharge address of the patient was the same as the admission address.

#### Age

At the time of his last discharge within the time period, the person had to be at least 18 years old or not more than 60 years old. These ages were selected because it was assumed that they represent the major portion of the age range of the laboring population, and because this range tends to exclude persons whose vocational problems may be more related to extreme age than to emotional condition.

#### Psychiatric Diagnosis

In order to be included in the study the person had to have his final primary diagnosis included in one of the following major diagnostic categories: (according to the Diagnostic and Statistical Manual of the American Psychiatric Association, 1952) psychotic disorders (20-24), psychophysiological, autonomic, and visceral disorders (30-39), psychoneurotic disorders (40), personality disorders (50, 51, 53) and transient situational personality disorders (54).

In no case where there was only one discharge for a person in the time period were primary diagnoses from the following categories included in the study: acute brain disorders (01-09), chronic brain disorders (10-19), sociopathic personality disturbance (52) and mental deficiencies (60-62).

Sociopathic personality disturbance (52) and acute brain syndrome associated with intoxication (02) were permitted as secondary diagnoses when only one discharge was recorded. The above two diagnostic categories were permitted as

primary for no more than one discharge in a series of two or more discharges within the time period.

### Physical Diagnosis

Any person whose hospital record included information about a physical condition which would clearly represent a vocational handicap was excluded from the study. Other persons whose hospital charts mentioned a physical condition, with no clear indication of its severity, in terms of vocational functioning, were included. The judgments regarding inclusion on this variable were made by the researcher on the basis of available evidence.

There were six criteria, in summary, which had to be met before a person was included in the study. These were criteria regarding: hospitalization, date of discharge, county of residence, age, psychiatric diagnosis and physical diagnosis.

### Demographic Data

Three issues were dealt with in the construction of the data collection sheet. The first, what were the variables upon which information was desired? Second, what information was consistently and comparably available from the records at the different hospitals? Third, what additional information was needed in order to identify patients for cross-checking data sheets from the different hospitals and for future research follow-up?

Since residence was a criterion for inclusion, detailed information on address and next of kin was sought. A need to know the local address for demographic use and additional follow-up was anticipated.

Date of birth was needed to establish eligibility.

Information regarding sex, race and marital status was requested for demographic analysis.

Information regarding occupation and duties of job were requested for each person hospitalized. In addition, the husband's occupation and place of employment were requested for married women. The father's or mother's occupation was requested for unmarried young persons who listed father or mother as next of kin.

The hospital and hospital number was requested for purposes of identification, grouping, and for future follow-up. Likewise, the name of the attending physician, where applicable, was taken.

Admission date, discharge date, and length of hospitalization were also requested.

The name of the person, place, or institute to which a person was discharged or transferred was also requested.

The fact of or listing of previous hospital admission was gathered for persons when applicable.

Primary and secondary diagnoses with their respective code numbers were listed.

Notes regarding treatment, physical disability, or any other extenuating facts in the charts which would have a bearing on the classification or eligibility for patients being included in the study were taken.

A coding system commensurate with the IBM card sorting system was developed. Two items, however, required coder judgments and the conventions used are elaborated for the coding of occupation and socio-economic status.

#### Occupations

Two problems arose in the coding of occupational information. The first of these was the lack of completeness of the information gathered from the hospital charts. The second problem was the lack of knowledge at the time of coding as

to how extensive we would wish to analyze our data. It was decided to use the Dictionary of Occupational Titles (DOT) (1949) (10) three digit occupational code, because it was impossible to deal with the information available in terms of a more detailed coding. Special three digit codes not included in the DOT were set up for categories of housewife, student, and retired persons. When information was available for a student or a retired person regarding the occupation which he was in or is being trained in, this occupational area was coded. In a like manner, when a married woman listed an occupation in addition to her status as housewife, this occupation was coded, whether or not she was employed in it at the time. Two graduate students in psychology did the coding, both of whom were familiar with the DOT and a very high concordance in coding of occupational data was obtained.

The major occupational groupings used in the final analysis were quite comparable to the Hennepin County census figures as is reported later in the report. This suggests the reliability of occupational coding is sufficiently high to warrant the confidence of the reader.

#### Socio-Economic Status

The Minnesota Scale for Paternal Occupations (MSPO) (3) was used as the socio-economic index in this study. The following conventions were used in classifying a person by socio-economic status:

- A. Married males listing an occupation were coded according to the MSPO.
- B. Married women for whom the husband's occupation was listed were classified according to their husband's occupation. This was done whether or not they listed their own occupation in addition to being a housewife.



- C. For those married women whose husbands' occupations were not listed and who themselves listed an occupation, classification was according to their own occupation.
- D. Young unmarried persons apparently living at home were classified according to their father's occupation when it was available.
- E. When the father's occupation for younger unmarried persons was not listed, but their own occupation was listed, they were classified according to their own occupation.
- F. Retired persons listing an occupation were classified according to their previous occupation.
- G. Separated, divorced, or widowed persons were classified according to the MSP0 by their own occupation if males, or according to their estranged spouse or deceased spouse's occupation when available, if they were women
- H. All persons for whom inadequate information was available for classification according to the MSP0 were left unclassified.

The Socio-economic levels are referred to by number which is roughly equivalent to the job levels:

- I Professional
- II Semi-professional and managerial
- III Clerical, skilled trades, and retail business
- IV Farmers
- V Semi-skilled occupations, minor clerical positions and minor business
- VI Slightly skilled trades and other occupations requiring little training or ability
- VII Day laborers of all classes

In summary, for socio-economic status, classification was as follows. The occupation of the head of the household was used to classify by socio-economic status when it was available, or the occupation of the patient himself when more adequate information was not available. Again, these classifications and codings were open to interpretation, and statistical evidence of reliability was not obtained. However, three graduate students in psychology, each quite familiar with the use of the Minnesota Scale for Paternal Occupations, did the codings, and degree of concordance apparently was quite high. Comparable information in terms of comparison of the socio-economic ratings for each major occupational grouping for the discharge population and the Hennepin County census population are reported below.

#### Length of Hospitalization

In determining the length of hospitalization for coding the convention was used of a 30 day month and a 360 day year.

These data are analyzed and presented in the first section of the results section below. (Description of the population of 1730 discharged patients).

#### Survey of Services Rendered to 1730 Patients

Five public agencies servicing Hennepin County residents which would permit their files to be read and information gathered on the services received by the 1730 discharged population was sought. In each agency the 1730 names and dates were compared to the agency lists for the period after discharge. Once a record of agency contact with a member of the discharge population was found, the agency chart was read. The dates of agency contact were compared with the discharge date on the master list. If the discharged subject had been

active with the agency prior to the listed discharge date and this activity continued into the post-discharge period, the questionnaire on services was filled out. If the discharged subject became active with the agency within 90 days following his discharge, the nature of the contact with the agency was noted. Services offered after the 90 day period were also noted.

The following agencies were surveyed: 1) The State Division of Vocational Rehabilitation (DVR), 2) The Department of Public Relief (DPR), both relief and Vocational Guidance Service (VGS), 3) Hennepin County Welfare Board (HCWB). This included the Mental Health Unit (MHU), Aid to Dependent Children (ADC), Aid to the Blind (AB), and Aid to the Disabled (AD), as well as other services to children and unmarried mothers, and 4) Minnesota State Employment Service University Hospitals Rehabilitation Project (U. Proj.)

A report of these results appears below as a description of the services offered by public social agencies to the population of 1730 patients.

#### Follow-Up Survey of Vocational Status - A Pilot Study

A follow-up study was undertaken in the summer of 1962. It was decided to take a 20 percent sample of the original population of 1730 patients and to stratify the sample according to sex-occupation and severity of illness. By sex-occupation the population was composed of 1) Men, 2) Working women, and 3) Housewives. By severity of illness there were 1) those discharged after a hospitalization of 0 - 19 days, 2) those discharged after hospitalization of 20 - 89 days, 3) those discharged after hospitalization of more than 90 days, and 4) those discharged-rehospitalized and discharged more than once during the one-year period.

A 12 cell stratification of the population was prepared. Table 1, below, presents this data. Ratios were adopted to sample most heavily 1) those patients

Table 1 Population of 1730 Patients According to Stratification Criteria, Length of Hospitalization, Sex and Occupational Status with the Density of Sampling as Noted

Length of Hospitalization	<u>Men</u>			<u>Working Women</u>			<u>Housewives</u>		
	Orig. Pop.	Proportion	Sample Group	Orig. Pop.	Proportion	Sample Group	Orig. Pop.	Proportion	Sample Group
0-19 Days	179	1 in 6	30	176	1 in 6	29	201	1 in 12	17
20-89 Days	174	1 in 4	44	193	1 in 6	32	213	1 in 10	21
90+ Days	114	1 in 2	57	86	1 in 4	21	115	1 in 6	19
Multiple Hospitalizations	71	1 in 2	36	89	1 in 4	22	118	1 in 6	20
Total	538		167	544		104	647		77

who had been hospitalized for a longer time, 2) those with multiple hospitalizations, and finally 3) the men (more heavily than the working women) and the working men more heavily than the housewives. It was felt that since employment was the major follow-up variable measured, to sample men most heavily and housewives least heavily would yield the most interesting data. In Table 1 are the number in each cell of the original population and the sampling ratio and the number selected for interviewing. The sampling within each cell was random. Each case was numbered and then chosen with the use of a table of random numbers.

The two to three-year-old hospital chart data of the sample group of 348 was checked against current directories. Ninety-three persons were no longer listed in any of the more prominent city directories (The Twin City Telephone Books, the City Directories, and the Yellow Book Credit Directory.) The 93 were accepted as "lost" without further attempt at locating them since the present follow-up was intended to be a pilot study. Using a Minneapolis postal zone directory, the remaining 255 sample members were distributed geographically by Minneapolis and Hennepin County postal zones.

An interview staff of five graduate students was trained. The interview period of August 1 to September 15, 1962, yielded 139 completed interviews, 30 partial home interviews, 12 refusals, and four persons dead. Eighteen persons were found to be rehospitalized at St. Peter State Hospital. Two interviewers journeyed to St. Peter in order to interview these patients. Thirteen patients were interviewed completely and partial data was gathered on the other five who were either on provisional discharge, home visiting, or indisposed. Partial interviews resulted when subjects refused to answer questions about their income, or hospitalization, or present symptomatology. After September 15, the third interviewer undertook to complete the survey



by telephone instead of home interview. The interview schedule was cut down to nonsensitive data which no person had refused to give in home contacts.

The telephone interview yielded 64 partial interviews, five not reachable, and one dead. The interview data then fell into three major groups:

- 1) 139 completed interviews
- 2) 94 partial interviews
- 3) 115 without information. Lost (93), refused (12), dead (5), uncontactable (5).

### Results

#### Description of the Population of 1730 Discharged Patients

In this section the demographic factors or descriptive data for the entire population are presented. They are presented singly and in combination and compared to the census statistics for the county when these are available. This description is a complete report of the population characteristics.

#### Single Factors

Age. The population of persons discharged from mental hospitals and psychiatric wards of general hospitals included 1730 people, of whom 538 (31 percent) were males and 1192 (69 percent) females, as compared with Hennepin County residents between the ages of 18 and 60, of whom 47 percent were males and 53 percent were females. The mean age for males was 38.9 with a standard deviation of 11 years, and the mean age for females was 38.9 with a standard deviation of 11.3 years.\*

Table 2 shows the percentages of mental patients within the ten age groupings and the census percentages within these age groupings for the age

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\*It is likely that the large discrepancy in the proportions of males and females between the discharged population and Hennepin County residents can be accounted for by the fact that the V.A. Hospitals (primarily males) did not cooperate in the survey.

Table 2 A Comparison of Dischargees with Hennepin County Population, by Age and Sex

Age	Males				Females			
	Dischargees		Henn. Co. Census		Dischargees		Henn. Co. Census	
	N	%	N	%	N	%	N	%
18-19	21	4	9,692	5	36	3	14,319	6
20-24	34	6	25,345	12	111	9	32,250	14
25-29	60	11	26,703	13	142	12	27,429	12
30-34	97	18	27,655	14	167	15	28,717	13
35-39	71	13	28,228	14	172	15	29,062	13
40-44	72	14	24,982	12	151	13	26,810	12
45-49	73	14	22,498	11	156	13	24,323	11
50-54	54	10	20,543	10	133	11	22,859	10
55-59	48	9	18,306	9	103	9	20,988	9
Total	530				1171			

Note: The dischargee total does not include the 60 year old males (N = 8).  
 $\chi^2 = 30.716$ , 8 d.f. p .0005

The dischargee total does not include the 60 year old females (N = 21).  
 $\chi^2 = 54.282$ , 8 d.f. p .0005

range 18-59, excluding the 60 year olds, which were not separated discretely in the census figures. Tables 3 and 4 show the percentages for patients distributed by age and socio-economic status, sex and socio-economic status, and the totals for males and females. When comparing males and females by age (Table 2) there are proportionally fewer males in the age range 18-24 than females. The percentage of males in the age range 30-34 exceeds that of the females by 3 percent. This indicates, as does the standard deviation shown above, that the male patients tend to be clustered more heavily around the mean. Though the cited deviations are apparent, it should be mentioned that the striking fact of Table 1 is the great similarity to the census data.

Socio-Economic Status. The socio-economic status levels have been calculated both for the discharged patients and for the Hennepin County residents in the labor force at the time of the 1960 census. These data appear in Table 5. It should be noted that in the analysis of Table 5 the unclassified persons within the discharge population were not used in computing the percentages just compared. The status levels were assigned on the basis of the Minnesota Scale for Paternal Occupations. The percentage within Level I for the total and for males and females of the discharged population is identical with that for the Hennepin County male population as a whole, as it is also in Level IV (which is primarily agricultural workers). The proportion in Level II is over-represented in the discharged population for both males and females as compared with the males' proportions in Hennepin County. The males' Level III patient group is proportional to the males in the county as a whole, but among females there are more in the discharged population than males in Hennepin County. Level V seems to be somewhat more representative of female patients, but slightly less representative of males in the discharge population as compared with males in Hennepin County. Level VI is under-

Table 3 A Comparison of Dischargees, by Socio-economic Status and Age

Status Level	Age									
	18-19		20-24		25-29		30-34		35-44	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
I	3	8	5	4	14	8	19	8	28	7
II	3	8	13	10	28	16	36	16	69	17
III	8	20	43	34	52	30	66	29	108	27
IV	0	-	1	1	0	-	1	-	3	1
V	14	36	42	33	49	29	70	30	121	30
VI	7	18	11	9	18	11	26	11	50	12
VII	4	10	12	9	10	6	12	5	26	6
Totals*	39		127		171		230		405	

	45-54		55-60	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
I	17	5	7	5
II	52	14	23	17
III	103	29	44	32
IV	3	1	0	-
V	123	34	38	28
VI	40	11	16	12
VII	21	6	10	7
Totals*	359		138	

\*Note: Totals exclude unclassifiable dischargees.

Table 4-5

A Comparison of Dischargees with Hennepin County  
Population, by Socio-economic Status and Sex

Occupational Level*	Sex					
	Males			Females		
	Dischargees		Census	Dischargees		Census
	N	%	%	N	%	%
I	30	6	6	63	6	
II	72	15	10	152	15	
III	105	22	25	319	32	
IV	6	1	1	2	-	
V	138	29	33	319	32	
VI	59	12	19	109	11	
VII	73	15	6	22	2	
Total Classified**	483			986		

\*Note: Occupational level based on Minnesota Parental Occupational Rating Scale. Therefore, socio-economic status levels are not available for females.

\*\*Note: Totals exclude unclassifiable dischargees.



represented among both males and females as compared with the male census figures. The last finding is that Level VII among patients is over-represented among the males but quite under-represented among the females as compared with the census figures based on the males employed in the labor force.

Though there were no comparable census figures available in the comparison of socio-economic status by age levels, these were computed for the population combining males and females. These data are not presented here. They show that in the younger age group the lower socio-economic levels are over-represented and the upper socio-economic levels (except for Level 1) are under-represented when compared with the total population of discharged persons. However, beyond that one generalization there seem to be few other significant differences in socio-economic level according to age.

Marital Status. Comparable Hennepin County census figures for the age separations used in this study were not found for the dimension of marital status; consequently, Table 6 which deals with marital status, uses the age range of 18-54 for the discharge population for comparability with the census figures. In this table there are 16 percent fewer married men and 6 percent fewer married women than would be expected from the census data and there are proportionally more persons in the divorced, separated, and widowed categories when compared with the census figures. The data in Table 6 shows that proportionally more single males are in the discharged population.

Since census figures were available for marital status and age groups, these were calculated for the population of discharged persons. Contrary to the total figures, single persons are under-represented in the age range 18-19, and married and separated persons are over-represented in this period. Divorced, separated, and widowed persons are slightly over-represented in each

Table 6 A Comparison of Dischargees with Hennepin County Population,  
by Marital Status and Sex

Marital Status	Sex					
	<u>Males</u>			<u>Females</u>		
	<u>Dischargees</u>		<u>Census</u>	<u>Dischargees</u>		<u>Census</u>
	N	%	%	N	%	%
Single	159	29	22	207	17	20
Married	318	59	75	801	67	73
Divorced	33	6	2	86	7	3
Separated	20	4	1	35	3	1
Widowed	8	2	1	63	5	3
Total	538			1192		

of the age categories. Single persons are very much over-represented in the age range 25-34.

#### Occupation versus Other Factors

The small number of males classified in the agriculture and service groupings have been included in the semi-skilled classification for the following tables and discussion. Because of the relatively small number of females in the laboring area, these have not been separated for skilled groups.

Age-Males. (Table 7) There are proportionally more males in the 30-34 age group for the total discharge population of males compared with the Hennepin County census figures. In the professional-managerial classification, 86 percent of the discharged males are 30 years or older, which over-represents each of the age categories from 30 through 60, as compared with the census figures. Among male patients in the clerical-sales group, there are proportionally more in each of the age categories over age 30, except the categories 35-39 and 50-54. This suggests a considerable variability in the ages of persons in this occupational category. Perhaps this is accounted for by the relative ease of entry and exit in this occupational category (as opposed to the stability of the professional-managerial or skilled classifications.) Though there are proportionally fewer male patients in the 35-39 age group in the skilled classification, yet, there is over-all a predominance of males between the ages 30-49 in this same classification, and, again, there is some under-representation in persons under 29. Likewise, in the agricultural, service, semi-skilled patient group, there tends to be over-representation of persons 55 and older. Unskilled male patients seem to be concentrated in the age range 30-39 and 45-49, but 50 percent of males unclassified are 29 years or younger. Twenty-one percent of the total discharged male population are in these age groups while 30 percent of the county residents are in these age groups.

Table 7 A Comparison of Dischargees with Hennepin County Population,  
by Occupation and Age: Male

Occupation		Age				
		18-19	20-24	25-29	30-34	35-39
Professional & Managerial	N	0	3	14	20	22
	%	-	2	11	16	17
Clerical & Sales	N	1	4	10	15	8
	%	1	5	13	19	10
Skilled	N	1	1	8	13	4
	%	2	2	13	21	7
Service, Agriculture & Semi-skilled	N	2	7	9	19	15
	%	2	7	9	18	15
Unskilled	N	4	10	7	20	16
	%	4	10	7	20	16
Unclassified	N	13	9	12	10	6
	%	19	13	18	15	9
Total	N	21	34	60	97	71
	%	4	6	11	18	13
Hennepin County Population		%	5	12	13	14

Table 7 A Comparison of Dischargees with Hennepin County Population,  
by Occupation and Age: Male (continued)

Occupation		Age					
		40-44	45-49	50-54	55-60	Total	
Professional & Managerial	N	17	16	15	19	126	
	%	13	13	12	15	99	
Clerical & Sales	N	15	11	5	10	79	
	%	19	14	6	13	100	
Skilled	N	10	11	6	7	61	
	%	16	18	10	11	100	
Service, Agriculture & Semi-skilled	N	15	16	15	5	103	
	%	15	16	15	5	102	
Unskilled	N	11	17	8	8	101	
	%	11	17	8	8	101	
Unclassified	N	4	2	5	7	68	
	%	6	3	7	10	100	
Total	N	72	73	54	56	538	
	%	13	14	10	10	99	
Hennepin County Population		%	12	11	10	9	100

In summary, psychiatric breakdown tends to be more frequently after thirty in all occupations except at the unskilled levels where it occurs earlier. The skilled labor group seems more resistant to breakdown than all other groups.

Age-Females. (Table 8) The total population of discharged women is very much like that of the Hennepin County females, except there are a few less patients than would be expected in the age ranges 18-24, as well as a few more patients than would be expected in the age ranges 30-49. Approximately 55 percent of all the women included in the population of discharged females are housewives only, and as would be expected, this group tends to be over-represented in the age ranges 30-49. Housewives are radically under-represented in the age ranges 18-19, which would be expected for the marriage rate of this age group. When comparing all professional-managerial and clerical-sales women with the total percentages for the population of discharged women, there appear to be more patients in the younger age (below 25) professional-managerial, and for clerical-sales groups, and more in the age groups above 49 for both clerical-sales and professional-managerial groups. The service and labor classifications appear to be too frequent in the older age ranges, but somewhat too common in the younger age ranges. The unclassified group of women seem to be disproportionally frequent in the age ranges below 29.

When comparing the occupations for women with the percentages based on the total of women less the 655 housewives, it appears that the distributions are very much the same. Thus, in summary, it appears that the very large number of housewives in this population affect the interpretation of distribution of occupations by ages; because so many housewives fall in the middle age ranges. It may also be said that there appears to be a very strong interaction between



Table 8 A Comparison of Dischargees with Hennepin County Population,  
by Occupation and Age: Female

Occupation		Age				
		18-19	20-24	25-29	30-34	35-39
Professional & Managerial	N	4	9	14	12	11
	%	4	10	15	13	12
Clerical & Sales	N	8	28	22	24	23
	%	4	14	11	12	12
Service	N	3	6	10	7	12
	%	4	7	13	9	15
Labor	N	1	2	3	11	6
	%	2	4	6	22	12
Housewives	N	5	47	76	103	108
	%	1	7	12	16	16
Unclassified	N	15	19	17	10	12
	%	12	16	14	8	10
Total	N	36	111	142	167	172
	%	3	9	12	14	15
Total*	N	31	64	66	64	43
	%	6	12	12	12	8
Hennepin County Population		%	6	14	12	13

\*Excludes 655 housewives.

Table 8 A Comparison of Dischargees with Hennepin County Population,  
by Occupation and Age: Female (continued)

Occupation		Age				
		40-44	45-49	50-54	55-60	Total
Professional & Managerial	N	12	9	11	9	91
	%	13	10	12	10	99
Clerical & Sales	N	26	25	25	13	194
	%	13	13	13	7	99
Service	N	10	14	10	8	80
	%	13	17	13	10	101
Labor	N	7	8	5	8	51
	%	14	16	10	16	102
Housewives	N	83	90	71	72	655
	%	13	14	11	11	101
Unclassified	N	13	10	11	14	121
	%	11	8	9	12	100
Total	N	151	156	133	124	1192
	%	13	13	11	10	100
Total*	N	68	66	62	52	537
	%	13	12	12	10	97
Hennepin County Population	%	12	11	10	9	100

\*Excludes 655 housewives.

marriage and the woman's being occupied in the competitive labor market. This relationship will be more closely detailed when considering female occupations by marital status.

Marital Status-Males. (Table 9) Seventy-five percent of males in Hennepin County between the ages of 18 and 60 are married; whereas, only 59 percent of the males in the population of discharged males are married. As there is an under-representation in the married classification, there tends to be an over-representation in each of the other four marital status groups for the discharged males. However, there are wide divergencies between the occupational groups in terms of marital status. For instance, in the professional-managerial classification the percent married is exactly the same as that for the Hennepin County census. In the unclassified group, according to occupations of males, the reverse tendency seems to be apparent; 57 percent of these persons are single, and only 25 percent are married. (Note earlier breakdown in the unskilled group.) In the unskilled groups, there are equal numbers of married and single persons. The service, agricultural, and semi-skilled groups in census data represent the total discharge figures very closely, with somewhat over-representation in the divorced, separated, and widowed categories. But the percentages for the skilled males are very strongly toward the married category, even exceeding that of the Hennepin County census percentages. (Note less frequent breakdown in skilled group.) The clerical-sales group of men exceeds the percentage for the total discharge population in the married category, but is somewhat less than this category in the Hennepin County census, and in this same category there is a slight increase in percentage over the Hennepin County figures for the group of singles.

Table 9 A Comparison of Dischargees with Hennepin County Population,  
by Marital Status and Occupation: Male

Occupation		Marital Status					Total
		Single	Married	Divorced	Separated	Widowed	
Prof. & Mgr'l.	N	20	95	7	2	2	126
	%	16	75	6	2	2	
Clerical & Sales	N	19	54	1	4	1	79
	%	24	68	1	5	1	
Skilled	N	11	47	2	0	1	61
	%	18	77	3	-	2	
Semi-skilled*	N	26	61	9	4	3	103
	%	25	59	9	4	3	
Unskilled	N	44	44	7	6	0	101
	%	44	44	7	6	-	
Unclassified	N	39	17	7	4	1	68
	%	57	25	10	6	2	
Total	N	159	318	33	20	8	538
	%	29	59	6	4	2	
Henn. Co. Population		%	22	75	2	1	1

\*Includes Service and Agricultural occupations.

Marital Status-Females. (Table 10) Again, the interpretation of the figures here is somewhat confounded by the exceedingly large number of housewives. The percentage calculated is for the population of discharged females less the 655 housewives, and in these figures it is seen that less than 38 percent of the persons who are vocationally occupied are single, and 37 percent are married, 13 percent divorced, and 12 percent either separated or widowed. Thus, single, divorced, separated, and widowed females are disproportionately frequent on the labor market. The clerical-sales and service women very closely approximate these latter figures. Professional-managerial women seem to be more often in the single group. There is a very strong over-representation in single women in the unclassified group.

Length of Hospitalization-Males. (Table 11) Among all male discharges, 73 percent occur in two months or less, and 27 percent are in more than two months. There are some major differences between the occupational groups. Eighty-five percent of the professional-managerial grouping are discharged within two months or less, as compared with the 73 percent for the total psychiatric population, and of this same group, 40 percent are discharged in two weeks or less, as compared with 33 percent for the total psychiatric population. The length of hospitalization for professional-managerial men is somewhat shorter on the whole than for the total psychiatric population of discharged men. At the other extreme, 42 percent of the unskilled men are discharged in two months or less, and 58 percent are discharged in more than two months, as compared with 73 percent and 27 percent, respectively, for the total psychiatric population. In this same occupational grouping, 33 percent are hospitalized for one year or more, as opposed to only 14 percent in the total psychiatric population. This is indicative of extended lengths of hospitalization for this particular occupational group.

Table 10 A Comparison of Dischargees with Hennepin County Population,  
by Marital Status and Occupation: Females

Occupation		Marital Status					
		Single	Married	Divorced	Separated	Widowed	Total
Prof. & Mgr'l.	N	43	31	10	1	6	91
	%	47	34	11	1	7	
Clerical & Sales	N	74	78	24	7	11	194
	%	38	40	12	4	6	
Service	N	28	31	7	7	7	80
	%	35	39	9	9	9	
Labor	N	11	28	8	0	4	51
	%	22	55	16	-	8	
House- wives	N	3	600	17	13	22	655
	%	-	92	3	2	3	
Unclassi- fied	N	48	33	20	7	13	121
	%	40	27	16	6	11	
Total	N	207	801	86	35	63	1192
	%	17	67	7	3	5	
Total*	N	204	201	69	22	41	537
	%	38	37	13	4	8	
Henn. Co. Population		%	20	73	3	1	3

\*Excludes 655 housewives.



Table 11 Occupations of Males, by Length of Hospitalization

Occupation		Length of Hospitalization									Total
		0-1 Wk.	1-2 Wks.	2-3 Wks.	3-4 Wks.	1-2 Mos.	2-4 Mos.	4-12 Mos.	1-2 Yrs.	2+ Yrs.	
Prof. & Mgr'l.	N	28	23	8	24	25	8	4	4	2	126
	%	22	18	6	19	20	6	3	3	2	
Clerical & Sales	N	18	10	7	9	17	6	4	3	5	79
	%	23	13	9	11	22	7	5	4	6	
Skilled	N	11	9	9	9	12	0	4	5	2	61
	%	18	15	15	15	20	-	7	8	3	
Semi- skilled*	N	19	14	9	19	15	7	4	9	7	103
	%	18	14	9	18	15	7	4	9	7	
Unskilled	N	11	10	3	8	11	16	9	21	12	101
	%	11	10	3	8	11	16	9	21	12	
Unclassi- fied	N	17	10	5	7	15	7	3	1	3	68
	%	25	15	7	10	22	10	4	2	4	
Total	N	104	76	41	76	95	44	28	43	31	538
	%	19	14	8	14	18	8	5	8	6	

\*Includes Service and Agricultural occupations.

As with marital status for the service, agriculture, and semi-skilled group, there is a very close approximation of the total percentages for length of hospital stay. The skilled group of males tends to have shorter hospital stay, with 82 percent being discharged within two months and 50 percent of this total group being discharged within two weeks to two months. Within the clerical-sales group 78 percent are discharged in less than two months. This group looks like the total psychiatric population. The unclassified group seems to have a relatively short hospital stay compared with the total psychiatric population, with 80 percent discharged in less than two months and 40 percent being discharged within two weeks, as opposed to 73 percent and 33 percent respectively.

Length of Hospitalization-Females. (Table 12) As a whole, the hospital stay for females is somewhat shorter than that for males, with 81 percent of the total females discharged being discharged within less than two months as opposed to 73 percent for the males. There is an indication in these figures that professional-managerial women have relatively shorter hospital stays than do service and laboring women. Likewise, the unclassified women, predominantly made up of younger individuals, have shorter hospital stays than would be expected from the psychiatric population as a whole. When comparing women who are housewives with women who consider themselves to have some occupation other than housewife, 15 percent of the housewives were hospitalized longer than two months, whereas, 24 percent of those women with occupations were hospitalized at least this length of time.

#### Hospitals and Other Factors

Sex. In Hennepin County 47 percent of the population between the ages of 18 and 60 are males and 53 percent are females, but in the population of persons discharged from the hospitals, 31 percent are males and 69 percent are

Table 12 Occupations of Females, by Length of Hospitalization

Occupation		Length of Hospitalization									Total
		0-1 Wk.	1-2 Wks.	2-3 Wks.	3-4 Wks.	1-2 Mos.	2-4 Mos.	4-12 Mos.	1-2 Yrs.	2+ Yrs.	
Prof. & Mgr'l.	N	21	17	11	10	14	11	0	5	2	91
	%	23	19	12	11	15	12	-	6	2	
Clerical & Sales	N	23	14	37	28	38	17	10	12	15	194
	%	12	7	19	14	20	9	5	6	8	
Service	N	8	10	13	10	16	3	4	8	8	80
	%	10	13	16	13	20	4	5	10	10	
Labor	N	6	7	7	6	13	5	2	3	2	51
	%	12	14	14	12	25	10	4	6	4	
House- wives	N	102	126	97	94	136	44	9	21	26	655
	%	16	19	15	14	21	7	1	3	4	
Unclassi- fied	N	30	22	11	14	27	10	4	0	3	121
	%	25	18	9	12	22	8	3	-	3	
Total	N	190	196	176	162	244	90	29	49	56	1192
	%	16	16	15	14	20	8	2	4	5	
Total*	N	88	70	79	68	108	46	20	28	30	537
	%	16	13	15	13	20	9	4	5	6	

\*Excludes 655 housewives.

females. The county population ratio between males and females holds quite constant for the state hospital system and Minneapolis General Hospital; Glenwood Hills Hospital and St. Mary's Hospital have a predominance of females, with a ratio quite close to 70/30. An even greater proportion of females is to be found in University of Minnesota Hospitals and Fairview Hospital, where the ratio approximates 80/20. See Appendix A.\*

Age. (Table 13) Though there are some differences between the population of discharged persons and the Hennepin County population between the ages of 18 and 60, these differences are not large and are primarily in the younger age groups. Thus, it can be said that the population of discharges reflects the Hennepin County population in terms of age fairly accurately. Four hospitals approximate the age breakdown for the total of discharged patients very closely. These hospitals are Minneapolis General Hospital, Fairview, Glenwood Hills, and St. Mary's. However, two hospitals seem to depart from the total breakdown rather radically. Only 15 percent of the state hospital discharges are found in the age range 18-29; whereas, 23 percent of the total discharged population is found in this age range. And, again, in the state hospitals, 61 percent are between the ages of 30 and 49; whereas, only 55 percent of the total discharged population is in this age group. This indicates a considerably older group of persons being discharged from the state system. Whereas the state hospitals have an older population, University of Minnesota Hospitals has a considerably younger population than the total of persons being discharged. Sixty-three percent of University of Minnesota Hospitals' people are being discharged between the age of 18 and 34, as opposed to 38 percent of the total patient discharges. Again, this is reflected in the lower mean age for persons discharged from

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\*Unless otherwise stated, all references in this Chapter are to Appendix A.

Table 13 A Comparison of Dischargees with Hennepin County Population, by Hospital of Last Discharge and Age

Age		Hospital						Total	Henn. Co.
		State	MGH	UMH	Fairview	Glenwood	St. Mary's		
18-19	N	8	11	4	3	21	10	57	6
	%	3	6	5	1	3	4	3	
20-24	N	17	20	13	15	61	19	145	13
	%	6	11	16	7	9	7	8	
25-29	N	18	32	17	28	80	27	202	13
	%	6	17	21	13	11	10	12	
30-34	N	44	27	17	36	111	29	264	13
	%	16	14	21	16	16	11	15	
35-39	N	42	24	7	34	96	40	243	13
	%	15	13	9	16	14	15	14	
40-44	N	43	21	8	23	90	38	223	12
	%	15	11	10	11	13	14	13	
45-49	N	41	19	6	32	94	37	229	11
	%	15	10	7	15	13	14	13	
50-54	N	33	17	4	20	79	34	187	10
	%	12	9	5	9	11	13	11	
55-59	N	23	16	5	23	59	25	151	9
	%	8	8	6	11	8	10	9	
60	N	12	1	1	4	8	3	29	
	%	4	1	1	2	1	1	2	
Total		N	281	188	82	218	699	262	1730

University of Minnesota Hospitals.

Occupations, Male. (Table 14) According to 1960 census data for Hennepin County employed males, 28 percent are in the professional-managerial classification, 20 percent in clerical-sales; whereas, 48 percent are found in the remainder of the labor market. The percentages for occupations for males was calculated to exclude that group of persons who did not respond. For the purposes of this analysis, these people shall be considered in the labor force, and figures for the total population of discharged people indicate that there is a slight under-representation of the professional-managerial and clerical-sales classifications in this patient population. It is interesting to note that 27 out of the 82 males discharged from Minneapolis General Hospital (33 percent) were in the no-response category. It is likely that this very large percentage is indicative of the transiency of that particular hospital's population. Another explanation for this high rate of non-response might be indicative of the fact that this is the public hospital serving persons who may be on the relief rolls. Perhaps the outstanding fact to be found is the difference between the state hospital system and the private hospitals. The difference referred to here is that 45 percent of the state hospital male discharges are classified unskilled, and a total of 77 percent are in the non-professional-managerial or clerical-sales classifications. These figures are to be evaluated in the light of the fact that these classifications include 56 percent of the total hospital discharger group and 50 percent of the population of Hennepin County at large. Again, looking at the other end of the continuum for the state hospital system, it may be seen that only 24 percent of the men discharged are in the professional-managerial or clerical-sales groupings, as opposed to 44 percent for the total hospital discharger population, or 50 percent for the Hennepin County population at large. The same tendency appears



Table 14 A Comparison of Dischargees with Hennepin County Population,  
by Hospital of Last Discharge and Occupation: Male

<u>Occup.</u>		<u>Hospital</u>							<u>Henn. Co.</u>
		<u>State</u>	<u>MGH</u>	<u>UMH</u>	<u>Fairview</u>	<u>Glenwood</u>	<u>St. Mary's</u>	<u>Total</u>	
Prof.& Mgr'l.	N %	11 9	8 10	4 24	17 39	49 26	37 49	126 23	28
Cler.& Sales	N %	18 14	12 15	3 18	9 20	28 15	9 12	79 15	20
Skilled	N %	12 9	5 6	2 12	4 9	32 17	6 8	61 11	
Semi-skilled	N %	27 21	16 20	2 12	9 20	38 20	11 15	103 19	48*
Unskilled	N %	55 43	14 17	3 18	3 7	21 11	5 7	101 19	
N.R.	N %	6 5	27 33	3 18	2 5	23 12	7 9	68 13	4
Total	N	129	82	17	44	191	75	538	

\*Note: Includes Skilled, Semi-skilled, and Unskilled occupations.

to be present at Minneapolis General Hospital, though it is not quite so pronounced. It is to be noted that University of Minnesota Hospitals discharged males exactly mirror the Hennepin County population percentages. Whereas, the three private hospitals have a predominance of persons in the professional-managerial classification, in relationship to the total discharged population of patients. In St. Mary's Hospital, it is to be noted that 67 percent of the males discharged are to be found in the professional-managerial or clerical-sales groups, as opposed to 44 percent in the total population of patients or 50 percent in the Hennepin County population of males. At the other end of the labor continuum, it is to be noted that the three private hospitals discharged between 7 and 12 percent of their males in the unskilled group, as opposed to 21 percent in the total hospital discharge population of males.

Occupations, Female. (Table 15) The most outstanding feature is the 655 females, or 55 percent, who are classified as housewives. In addition to the 655 women who are housewives, 121 women cannot be classified according to occupation. Since a large percentage of these "no response" women are married, it might be assumed that they too might be classified as housewives. Thus, from the three private hospitals between 59 and 65 percent of the women discharged are housewives; whereas, this percentage drops down to between 32 percent to 43 percent for the state and public hospitals.

For the purpose of further analysis of occupations for the women, the non-response and housewife categories have been dropped in calculating percentages. It should be noted that for employed women reported in the Hennepin County 1960 census, 18 percent were found in professional-managerial classification, 49 percent in clerical and sales classification, 20 percent in the service classification, and 14 percent in the other (including laboring) classifications.

Table 15 A Comparison of Dischargees with Hennepin County Population, by  
Hospital of Last Discharge and Occupation: Female

<u>Occup.</u>		<u>Hospital</u>							<u>Henn. Co.</u>
		<u>State</u>	<u>MGH</u>	<u>UMH</u>	<u>Fairview</u>	<u>Glenwood</u>	<u>St. Mary's</u>	<u>Total</u>	
Prof.& Mgr'l.	N %	9 6	2 2	12 18	15 9	35 7	18 10	91 8	17
Cler.& Sales	N %	40 26	7 7	17 26	26 15	75 15	29 15	194 16	47
Serv- ice	N %	24 16	16 15	6 9	4 2	21 4	9 5	80 7	19
Other (L'brg.)	N %	7 5	5 5	10 -	6 3	31 6	2 1	51 4	13
N.R.	N %	7 5	42 40	6 9	9 5	45 9	12 6	121 10	5
House- wives	N %	65 43	34 32	24 37	114 65	301 59	117 62	655 55	
Total	N	152	106	65	174	508	187	1192	

The percentages for the total female dischargees of employed women, or women given an occupational classification indicate that the percentages are very close to those for the Hennepin County population. Several important distinctions appear as we look at the individual hospital classifications. All of the hospitals except Minneapolis General discharge approximately the same percent of clerical and sales workers as appear in the population of the discharged women. Minneapolis General discharges proportionally less than half that of the other hospitals. Among males there is a relatively small percentage of the professional and managerial group being discharged from the state hospitals and from Minneapolis General Hospital (11 and 7 percent respectively.) However, University of Minnesota Hospitals which for males mirrored its population percentages is radically different for females. Thirty-four percent of the females discharged from University of Minnesota Hospitals are classified professional-managerial, 17 percent service, and none in the laboring classification. Fairview and St. Mary's Hospitals have a larger than expected percentage in the professional-managerial classification for women and lower percentages in the service and laboring classification for the two hospitals respectively (8 percent Fairview-Service, 3 percent St. Mary's-Laboring.) It may be noted that Glenwood Hills Hospital closely approximates the population of discharged females and the Hennepin County population for employed women.

Socio-Economic Status\*. (Table 16) The total population of persons discharged from the hospitals very closely approximates the Hennepin County population at large, excepting classification II and classification VI where

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\*For the purposes of this analysis it should be noted that persons who could not be classified by socio-economic status did not figure in the percentage calculations and that the group IV classification which is primarily composed of agricultural occupations has been excluded for purposes of brevity, and has been placed in the unclassified totals.

Table 16 A Comparison of Dischargees with Hennepin County Population,  
by Hospital of Last Discharge and Socio-economic Status

<u>Status Level</u>		<u>Hospital</u>							<u>Henn. Co.</u>
		<u>State</u>	<u>MGH</u>	<u>UMH</u>	<u>Fairview</u>	<u>Glenwood</u>	<u>St. Mary's</u>	<u>Total</u>	
I	N	5	3	16	16	34	19	93	6
	%	2	2	21	8	6	8	6	
II	N	14	5	11	38	97	59	224	10
	%	7	4	15	18	16	24	15	
III	N	34	17	20	78	202	73	424	25
	%	16	14	27	37	33	30	29	
V	N	80	48	19	55	194	61	457	33
	%	39	40	25	26	32	25	31	
VI	N	19	30	8	20	66	25	168	19
	%	7	25	11	10	11	10	11	
VII	N	55	18	1	1	15	5	95	6
	%	27	15	1	-	2	2	6	
Total*		N	207	121	75	208	608	242	1461

\*Note: Totals exclude unclassifiable dischargees.

there are apparent reversals. There is a slightly larger percentage than would be expected being discharged and classified level II and a slightly smaller percentage discharged classified as level VI. The findings between the hospitals indicate major differences between the state system and the three private hospitals, but particularly between state hospitals and University of Minnesota Hospitals. Twenty-seven percent of the persons discharged and classified from the state hospitals system are in level VII as opposed to only one percent for the University Hospitals, no persons from Fairview, and only 2 percent from Glenwood Hills and St. Mary's. Minneapolis General, however, has 15 percent classified in this level VII grouping. Looking at the other end of the socio-economic status continuum level number I we find the University of Minnesota Hospitals have 21 percent in this classification as opposed to only 6 percent in the total population for persons discharged in Hennepin County; whereas, in the three private hospitals this classification is approximately the same as the total and the Hennepin county population, but it is grossly under-represented in the state and in Minneapolis General discharges. Level I is approximately the same at Fairview Hospital as compared with the total; levels II and III seem to be represented heavily at that hospital, with 18 and 37 percent respectively. Level V is heavily represented in the state hospital system with 39 percent and at Minneapolis General Hospital 40 percent as compared with the 31 percent for the total. Level V is under-represented at University of Minnesota Hospitals, Fairview, and St. Mary's, with Glenwood Hills at 32 percent approximating the total figure very closely. Twenty-five percent of Minneapolis General Hospital discharges fall in classification VI as opposed to the 11 percent found in the total hospital discharge group. This is very high in comparison with the range from 9 to 11 percent found in the remainder of the hospitals which very closely approximates the total. In



summarizing this section, it may be said that the state hospital system sees few of the upper socio-economic levels and many of the lower socio-economic levels as is true with Minneapolis General Hospital, particularly levels V and VI. The University of Minnesota Hospitals samples heavily in the highest socio-economic group. Except for levels II and III which are over-represented in Fairview Hospital, level VII which is grossly under-represented in Fairview Hospital, and a heavy representation in level II at St. Mary's Hospital, the private hospitals seem to represent the total socio-economic distribution except in level VII.

Diagnosis for Males. (Table 17) Perhaps the most distinctive feature is that 74 percent of the state hospital males discharged are diagnosed as schizophrenics. University of Minnesota Hospitals have 41 percent of the males diagnosed schizophrenic; whereas, Minneapolis General Hospital has 31 percent as compared with the 33 percent of the total. The diagnostic category of involutional psychosis, though there are only a small number, people are to be found only at Glenwood Hills and St. Mary's Hospitals. Further, the diagnosis of neurotic anxiety reaction is to be found almost exclusively in the private hospitals with Fairview Hospital having as many as 34 percent of its discharges in this category. Though the same is almost true for the diagnosis of neurotic depressive reaction, there seems to be a number of such patients at both Minneapolis General Hospital and University of Minnesota Hospitals in this classification. Another significant difference between the hospitals is in the diagnostic categories of personality disorders and situational personality disorders where only 17 percent are found in the total discharge population for males, 57 percent of the Minneapolis General Hospital discharged males fall into these categories.

Table 17 Hospital of Last Discharge, by Diagnosis and Sex: Male

		Hospital						
Diagnosis		State	MGH	UMH	Fairview	Glenwood	St. Mary's	Total
<u>Psychosis:</u>								
Involutional	N	0	0	0	0	2	3	5
	%	-	-	-	-	1	4	1
Affective	N	10	1	2	1	14	7	35
	%	8	1	12	2	7	9	7
Schizo- phrenic	N	95	25	7	5	33	11	176
	%	74	31	41	11	17	15	33
Other Psychotic	N	1	1	0	0	1	5	8
	%	1	1	-	-	1	7	1
Psychophys- iological	N	0	0	0	0	0	4	4
	%	-	-	-	-	-	5	1
<u>Neurosis:</u>								
Anxiety	N	3	0	0	15	31	11	60
	%	2	-	-	34	16	15	11
Depressive	N	6	9	4	22	70	26	137
	%	5	11	24	50	37	35	25
Other Neurosis	N	0	0	1	0	11	4	16
	%	-	-	6	-	6	5	3
<u>Personality:</u>								
Trait	N	4	30	2	0	8	1	45
	%	3	37	12	-	4	1	8
Other	N	8	13	0	0	8	0	29
	%	6	16	-	-	4	-	5
Situa- tional	N	2	3	1	1	13	3	23
	%	2	4	6	2	7	4	4
Total	N	129	82	17	44	191	75	538

Diagnosis for Females. (Table 18) The most outstanding feature is the 74 percent of state hospital females who are diagnosed schizophrenic reaction. Twenty-six percent of the University of Minnesota Hospitals group is diagnosed schizophrenic. Though the number of persons diagnosed neurotic anxiety reaction among females is spread more evenly among the hospitals than for the males, again, it should be noted that the larger percentages were found in the private hospitals rather than in the public hospitals. Essentially the same finding holds for neurotic depressive reaction; however, there are substantially larger percentages from University Hospitals and Minneapolis General Hospital among females than there were among males. It should also be noted that 62 percent of the Fairview Hospital's discharged females were given the diagnosis neurotic depressive reaction, which was the largest single diagnostic category for the males at this hospital. Twenty-eight percent of the females discharged from Minneapolis General Hospital were in the diagnostic category personality disorders and situational disorders as opposed to a total of 8 percent in the total female discharged population. Though there were some significant differences between males and females in diagnosis between the hospitals, on the whole, the differences in diagnosis between hospitals tends to be more reliable and significant than the differences between sexes.

Length of Hospitalization. (Table 19) The hospitals are distinctly different in terms of the number of days their discharges have been hospitalized. No person discharged from Minneapolis General Hospital, University of Minnesota Hospitals, or the private hospitals had been hospitalized more than 360 days, yet, 64 percent of the state hospitalized people were hospitalized this long. Almost 100 percent of the state hospitalized patients had been hospitalized longer than 15 days, but 69 percent of the Minneapolis General Hospital discharges had been hospitalized fewer than 21 days. The three private hospitals

Table 18 Hospital of Last Discharge, by Diagnosis and Sex: Female

		Hospital						
Diagnosis		State	MGH	UMH	Fairview	Glenwood	St. Mary's	Total
<u>Psychosis:</u>								
Involutional	N	14	6	8	7	21	7	63
	%	9	6	12	4	4	4	5
Affective	N	13	2	6	3	29	4	57
	%	9	2	9	2	6	2	5
Schizo- phrenic	N	113	38	17	15	87	32	302
	%	74	36	26	9	17	17	25
Other Psychosis	N	6	4	1	2	4	5	22
	%	4	4	2	1	1	3	2
Psychophys- iological	N	0	1	0	3	3	2	9
	%	-	1	-	2	1	1	1
<u>Neurosis:</u>								
Anxiety	N	1	3	1	20	77	26	128
	%	1	3	2	11	15	14	11
Depressive	N	1	20	18	108	237	86	470
	%	1	19	28	62	47	46	39
Other	N	3	3	3	6	18	13	46
	%	2	3	5	3	4	7	4
<u>Personality:</u>								
Trait	N	0	26	9	4	3	4	46
	%	-	25	14	2	1	2	4
Other	N	1	2	1	0	4	1	9
	%	1	2	2	-	1	1	1
Situa- tional	N	0	1	1	6	25	7	40
	%	-	1	2	3	5	4	3
Total	N	152	106	65	174	508	187	1192

Table 19 Number of Days of Last Hospitalization, by Hospital

Days	Hospital											
	State		Mpls. General		UMH		Fairview		Glenwood Hills		St. Mary's	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1 - 7	2	.7	61	32.4	8	9.8	31	14.2	116	16.6	76	29.0
8 - 14	0		47	25.0	7	8.5	34	15.6	125	17.9	59	22.5
15 - 21	6	2.1	22	11.7	7	8.5	31	14.2	116	16.6	35	13.4
22 - 29	4	1.4	19	10.1	11	13.4	52	23.9	114	16.3	38	14.5
30 - 59	16	5.7	27	14.4	19	23.2	59	27.1	174	24.9	44	16.8
60 - 119	24	8.5	11	5.9	25	30.5	11	5.0	53	7.6	10	3.8
120 - 359	50	17.8	1	.5	5	6.1	0		1	.1	0	
360 - 719	92	32.7	0		0		0		0		0	
720 or more	87	31.0	0		0		0		0		0	
Total	281	99.9	188	100.0	82	100.0	218	100.0	699	100.0	262	100.0

are quite similar to one another with approximately 92 to 96 percent of their patients being discharged within a two-month period. However, 67 percent of the University of Minnesota Hospitals patients were hospitalized between three weeks and two months.

#### Diagnoses and Other Factors

Diagnosis was one of the criteria used in selecting the patients used for the study. No person has been included whose diagnosis was lacking a diagnosis on the hospital chart. For purposes of this analysis detailed diagnostic categories have been combined into major subgroupings.

Sex. (Table 20) The major diagnostic classes were: involuntional psychotic reaction which constituted 4 percent of the total population (1 percent of the males, 5 percent of the females), affective reactions, making up 5 percent of the total population (7 percent of the males, 5 percent of the females), schizophrenic reactions, which includes 28 percent of the total population (33 percent of the males and 25 percent of the females), psycho-neurotic reaction, constituting 11 percent of the total population (11 percent of the males, 11 percent of the females), psycho-neurotic depressive reaction, constituting 35 percent of the total population (25 percent of the males, 39 percent of the females), the personality disorders (excluding sociopathic personality disturbance), constituting 7 percent of the total population (13 percent of the males, 5 percent of the females), transient situational personality disorders making up 4 percent of the total population (4 percent males, 3 percent females), and a category called "other" which included 6 percent of the total population (6 percent of the males, 7 percent of the females.) This last category includes other psychotic disorders, the psychophysiological, autonomic and visceral disorders, and other psycho-neurotic disorders.



Table 20 A Comparison of Dischargees with Hennepin County Population,  
by Diagnosis and Sex

Diagnosis	Sex					
	Male		Female		Total	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
<u>Psychosis:</u>						
Involutional	1	1	5	5	6	3
Affective	7	7	5	5	12	6
Schizophrenic	33	33	25	25	58	29
<u>Neurosis:</u>						
Anxiety	11	11	11	11	22	11
Depressive	25	25	39	39	64	32
Personality Disorder	13	13	5	5	18	9
<u>Situational</u>	4	4	3	3	7	3
<u>Other</u>	6	6	7	7	13	6
Total	100	100	100	100	200	99
Hennepin County Population		47		53		100

There are major differences in the distribution of the two sexes in the various diagnostic categories. None of the diagnostic categories represent a sex distribution approximating that of the census distribution of Hennepin County which is 47 percent male and 53 percent female; however, psycho-neurotic anxiety reaction has 32 percent male and 68 percent female which very closely approximates the total population of discharged persons, which is 31 percent male and 69 percent female. Three of the diagnostic categories, affective, schizophrenia, and situational disorders have approximately the same sex distribution that is roughly 4/6 (40 percent male, 60 percent female). Two of the diagnostic categories are quite predominantly female: depressive reactions is roughly 2/8 in favor of females and involutional psychotic reactions is roughly 1/9 in favor of females. The reversal in the diagnostic categories is found in the personality disorders where there are 57 percent males and 43 percent females.

Age. (Table 21) The differences in age for the diagnostic categories are numerically represented in Table 21. At the extremes of the age distribution are to be found the situational disorders, below age 35, and the involutional psychotic reaction, entirely above age 39. The affective reactions occur more frequently above age 35 and the schizophrenic reactions occur more frequently from 18 through 39. Anxiety reaction seems to occur over the period of ages from 25 through 49; whereas, depressive reaction tends to be more frequent in the age range 30 through 60. Though the personality disorders roughly approximate the distribution of the total population of discharged persons, it too tends to be high in the age range 30 through 34, and the category "other" tends to represent the total population age breakdown quite closely.

Table 21 A Comparison of Dischargees with Hennepin County Population,  
by Diagnosis and Age

Diagnosis	Age													
	18-19		20-24		25-29		30-34		35-39		40-44		45-49	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
<u>Psychosis:</u>														
Involu- tional	0	0	0	0	0	0	0	0	0	0	8	12	19	28
Affective	3	3	3	3	6	7	11	12	18	20	11	12	19	21
Schizo- phrenic	21	4	47	10	68	14	82	17	75	16	59	12	48	10
<u>Neurosis:</u>														
Anxiety	3	2	16	9	28	15	29	15	40	21	21	11	24	13
Depressive	9	1	47	8	64	11	89	15	76	13	84	14	87	14
<u>Personality Disorder:</u>	9	7	13	10	17	13	26	20	16	12	16	12	13	10
<u>Situation:</u>	9	14	10	16	10	16	10	16	5	8	7	11	6	10
<u>Other:</u>	3	3	9	9	9	9	17	16	13	12	17	16	13	12
Total	57	3	145	8	202	12	264	15	243	14	223	13	229	13
Henn. Co. Population		6		13		13		13		13		12		11

Table 21 A Comparison of Dischargees with Hennepin County Population,  
by Diagnosis and Age (cont.)

Diagnosis	Age				
	50-54		55-60		Total
	N	%	N	%	N
<u>Psychosis:</u>					
Involutional	21	31	20	29	68
Affective	6	7	15	16	92
Schizophrenic	45	9	33	7	478
<u>Neurosis:</u>					
Anxiety	16	9	11	6	188
Depressive	74	12	77	13	607
<u>Personality Disorder:</u>	12	9	7	5	129
<u>Situation:</u>	1	2	5	8	63
<u>Other:</u>	12	11	12	11	105
Total	187	11	180	10	1730
Hennepin County Population		10		9*	

\*Excludes persons 60 years of age.

Socio-Economic Status. (Table 22) Here there seems to be some major differences in the diagnostic groupings according to the dimension of socio-economic status. The two most pronounced differences appear to be in the schizophrenic reactions where there is an apparent consistent downward drift with a heavy over-representation of persons in level VII. In the psychoneurotic depressive reactions where there is a consistent upward drift in the socio-economic status with a rare occurrence among persons in level VII and a small over-representation of persons in level I. Anxiety reactions are concentrated primarily in levels II and III (63 percent) as opposed to the total population (44 percent) of discharged persons and 35 percent in the total Hennepin County socio-economic distribution. Situational personality disorders occur among 51 percent of the persons concentrated in level II and level III. The personality disorders are over-represented in levels V, VI and VII where there are 65 percent as opposed to 50 percent in the total population of discharged persons and 58 percent in the Hennepin County census distribution. Both of the two remaining psychotic categories have something of bi-modal distributions; the involutional psychotic reaction is over-represented in levels V and VI with a total of 49 percent as compared with 43 percent in the total discharge population and a slight over-representation in level I with a 9 percent as opposed to 6 percent. The affective reactions are over-represented in both levels II and V; the former with 18 percent versus 15 percent and the latter with 38 percent versus 31 percent. The "other" category is essentially one of downward drift with approximate representation of the total sample but a slight under-representation in level I.

Marital Status. (Table 23) The most pronounced disproportionality is the widowed category where the frequency of involutional psychotic reaction is high. The divorced category is related to personality disorders where 17 percent of

Table 22 A Comparison of Dischargees with Hennepin County Population,  
by Diagnosis and Socio-economic Status

Diagnosis	Status Level														
	I		II		III		V		VI		VII		Total	Uncl.	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>N</u>	<u>%</u>
<u>Psychosis:</u>															
Involun- tional	5	9	8	15	13	25	19	36	7	13	1	2	53	15	22
Affective	5	6	14	18	17	22	29	38	7	9	5	6	77	15	16
Schizo- phrenic	17	5	45	12	95	25	115	31	43	12	58	16	373	105	22
<u>Neurosis:</u>															
Anxiety	8	5	41	24	68	39	44	25	9	5	4	2	174	14	7
Depres- sive	51	9	75	14	170	31	171	31	64	12	7	1	538	69	11
Pers. Disorder:	3	3	13	13	18	18	32	33	20	20	12	12	98	31	24
Situa- tion:	2	4	11	20	17	31	17	31	6	11	2	4	55	8	13
Other:	2	2	17	18	26	28	30	32	12	13	6	6	93	12	11
Total	93	6	224	15	424	29	457	31	168	12	95	7	1461	269	16
Henn. Co. Pop.		6		10		25		33		19		6			



Table 23 A Comparison of Dischargees with Hennepin County Population,  
by Diagnosis and Marital Status

Diagnosis	Marital Status										
	Single		Married		Divorced		Separated		Widowed		Total
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>
<u>Psychosis:</u>											
Involutional	8	12	44	65	6	9	2	3	8	12	68
Affective	9	10	69	75	6	7	3	3	5	5	92
Schizo- phrenic	174	36	228	48	39	8	18	4	19	4	478
<u>Neurosis:</u>											
Anxiety	25	13	144	77	12	6	3	2	4	2	188
Depressive	78	13	460	76	27	4	16	3	26	4	607
Personality Disorder:	32	25	64	50	22	17	7	5	4	3	129
<u>Situation:</u>	17	27	43	68	1	2	1	2	1	2	63
<u>Other:</u>	23	22	67	64	6	6	5	5	4	4	105
Total	366	22	1119	65	119	7	55	3	71	3	1730
Henn. Co. Population		21		3		3		1		2	

the persons occur as opposed to 7 percent in the total discharged population and 3 percent in the census figures. Married persons are over-represented in three diagnostic categories (affective, anxiety, and depressive reactions), (77 percent) compared to 65 percent of the total discharge population and 73 percent for the Hennepin County census figures. There are more single persons in the situational disorders (27 percent) which is probably most accurately accounted for by the youth of this group. There are also many more single persons diagnosed schizophrenic (36 percent), which is only partly accounted for by the younger ages of persons classified in this diagnostic category.

Occupation, Male. (Table 24) The occupations of males have been separated into five major categories: 1) professional and managerial, 2) clerical and sales, 3) service, 4) agriculture, and 5) labor. This separation was used to compare the data with the Hennepin County census figures for the total discharge population and for each of the diagnostic categories. In the total population of discharged males, 13 percent were unable to be classified according to occupation. There were differences among the diagnostic categories in this lack of ability to classify the patients there. Twenty-two percent of the personality disorders of males could not be classified according to occupation. This is probably accounted for in part by the fact that these persons come primarily from Minneapolis General Hospital which uses this diagnostic category for transients.

The affective reactions are proportionally more frequent among the professional-managerial group and rarer in the laboring classification. Schizophrenia is common in the laboring and agricultural classification and uncommon in professional-managerial. The occupational distribution for anxiety and depressive reaction are typically the professional-managerial and clerical-sales groups as opposed to the laboring group.

Table 24 A Comparison of Dischargees with Hennepin County Population,  
by Diagnosis and Occupation: Male

Diagnosis	Occupation											
	Prof.& Mgr'l.		Cler.& Sales		Serv- ice		Agri- culture		Labor		Total	Uncl.
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>N</u>
<u>Psychosis:</u>												
Involutional	3	60	0	-	0	-	0	-	2	40	5	0
Affective	13	38	8	24	1	3	2	6	10	29	34	1
Schizo- phrenic	26	17	17	11	9	6	5	3	92	62	149	27
<u>Neurosis:</u>												
Anxiety	17	31	15	27	2	4	0	-	21	38	55	5
Depressive	40	33	21	17	9	7	1	1	51	42	122	15
Personality Disorder:	13	22	12	21	6	10	0	-	27	47	58	16
<u>Situational:</u>	5	26	4	21	1	5	0	-	9	47	19	4
<u>Other:</u>	9	32	2	7	2	7	0	-	15	54	28	0
Total	126	27	79	17	30	7	8	2	227	48	470	68
Henn. County Census Pop.		29		21		7		1		42		

Occupation, Female. (Table 25) The classifications for the purposes of this analysis are: 1) professional-managerial, 2) clerical-sales, 3) service, and 4) labor.

At the outset it should be noted that the largest single occupational group is that of housewife (55 percent of the total discharged females). However, there is a difference in the proportion of housewives represented in the various diagnostic categories. The anxiety and depressive reaction diagnoses each have 63 percent in the housewife group, and because of the large number in each of these diagnostic groups, each of the other diagnostic categories appears to be under-represented in terms of housewives. As among males, there are differences among the diagnostic categories in terms of persons classifiable by occupation, with the largest single percentage to be found in the personality disorders where 29 percent of persons so classified cannot be classified according to occupation. Likewise, anxiety and depressive reaction diagnoses for females are infrequent among persons who cannot be classified by occupation. As with the males, again, the percentage figures have been calculated in terms of the total persons classifiable by occupation, thus, excluding the unclassified and the housewives.

The total discharged female population closely approximates the census figures with the major difference being that proportionally more professional and managerial women are discharged from mental hospitals. Depressive and anxiety reactions are under-represented for females in the service classification; this is true, also, in the personality disorders. Unlike the males, the occupational classification for women diagnosed schizophrenic reactions is very much like the Hennepin County census figures. Many diagnoses do not bear comparison with occupation because of the small frequencies involved.

Table 25 A Comparison of Dischargees with Hennepin County Population,  
by Diagnosis and Occupation: Female

Diagnosis	Occupation													
	Prof. & Mgr'l.		Cler.& Sales		Serv-ice		Labor		Total		Uncl.		House-wives	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
<u>Psychosis:</u>														
Involuntional	4	18	8	36	5	23	5	23	22	35	6	10	35	55
Affective	4	17	11	48	8	35	0	-	23	40	7	12	27	48
Schizo-phrenic	24	19	64	50	26	20	15	12	129	43	41	13	132	44
<u>Neurosis:</u>														
Anxiety	11	27	20	49	5	12	5	12	41	32	7	5	80	63
Depressive	32	23	67	48	22	16	20	14	141	30	32	7	297	63
<u>Personality Disorder:</u>														
Situation:	4	31	6	46	2	15	1	8	13	24	16	29	26	47
Other:	5	29	7	41	4	24	1	6	17	43	4	10	19	47
<u>Other:</u>														
	7	23	5	17	8	27	4	13	30	39	8	10	39	51
Total	91	22	194	47	80	19	51	12	416	35	121	10	655	55
Henn. County Population		18		49		20		14						

Length of Hospitalization. (Table 26) There are major differences between the diagnostic categories in terms of the length of hospitalizations. Fifty-one percent of the persons diagnosed situational disorder are discharged from the hospital in one week or less and 65 percent of persons diagnosed with personality disorders are discharged from the hospital in two weeks or less. Sixty-one percent of those persons diagnosed with anxiety reaction are discharged from the hospital within three weeks. No persons diagnosed situational disorder are kept in the hospital more than four months and only one percent of those persons diagnosed with anxiety and depressive reactions are kept more than four months. Ninety-four percent of the persons diagnosed depressive reaction are discharged from the hospital within a 60 day period. Among persons diagnosed affective reaction, on the other hand, 85 percent remain in the hospital more than two weeks, but only 18 percent stay in the hospital more than four months. Likewise, in the involutional diagnosis, 50 percent of the persons are discharged between one and four months and only 16 percent are hospitalized longer than four months. It will be noted that for schizophrenics 50 percent are hospitalized for two months or longer and 31 percent are discharged only after one year or more. Persons included in the category "other" are found to be discharged after relatively short hospital stays.

#### Patients Receiving Or Not Receiving Aid From Public Agencies

All the patients' names were checked through the files of the agencies noted above. Three types of service were offered. 1) Vocational assistance (Division of Vocational Rehabilitation, Division of Public Relief-Vocational Guidance, Employment Services, and University Rehabilitation Project.) 2) Case



Table 26 Diagnosis of Dischargees, by Length of Hospitalization

Diagnosis	Length of Hospitalization																		
	0-1		1-2		2-3		3-4		1-2		2-4		4-12		1-2		2+		Total
	Wk.		Wks.		Wks.		Wks.		Mos.		Mos.		Mos.		Yrs.		Yrs.		
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>
<u>Psychosis:</u>																			
Involu- tional	3	4	6	9	5	7	9	13	26	38	8	12	3	4	4	6	4	6	68
Affective	6	7	7	8	13	14	13	14	25	27	11	12	5	5	4	4	8	9	92
Schizo- phrenic	26	5	44	9	33	7	53	11	82	17	54	11	40	8	75	16	71	15	478
<u>Neurosis:</u>																			
Anxiety	60	32	37	20	35	19	23	12	22	12	9	5	1	1*	1	*	0	*	188
Depressive	94	15	114	19	97	16	111	18	151	25	33	5	3	1**	3	**	1	**	607
<u>Personality Disorder:</u>																			
	42	33	41	32	12	9	8	6	11	9	8	6	4	3	2	2	1	1	129
<u>Situation:</u>	32	51	7	11	3	5	10	16	4	6	7	11	0	-	0	-	0	-	63
<u>Other:</u>	31	30	16	15	19	18	11	10	18	17	4	4	1	1	3	3	2	2	105
Total	294	17	272	16	217	13	238	14	339	20	134	8	57	3	92	5	87	5	1730

\* Percentage figure includes 4-12 month, 1-2 year, and 2+ year hospitalizations.

\*\*Percentage figure includes 4-12 month, 1-2 year, and 2+ year hospitalizations.

work services (Hennepin County Welfare Board—Mental Health Unit.) 3) Economic support (Division of Public Relief, Unemployment Compensation, and Categorical Aids from Hennepin County Welfare Board—Aid to Dependent Children, Aid to the Blind, Aid to the Disabled.) In the succeeding analysis, the characteristics of the patient groups at each of the agencies is presented. One additional aspect of the aid given is noted; this is the time of its occurrence after hospital discharge. Contacts with agencies have been noted as occurring either within 90 days after discharge or later than 90 days after discharge.

#### Patients Not Receiving Any Services After Discharge

The following tables present the demographic characteristics of the patients who received no service from any agency after hospital discharge. This is to the middle of August 1962. There is also reference material describing the county. Eleven hundred and eighty-five (68 percent) of the 1730 patients studied received no service within the two to three-year period after hospital discharge. Twenty-six percent were men and 74 percent were women. (Table 27) This is a slight favoring of women in this group. The no service group is more often married (73 percent versus 65 percent) (Table 28), more often from a private hospital (80 percent versus 68 percent) (Table 29), and less often schizophrenic (21 percent versus 28 percent) (Table 30). The two other characteristics of the sample, socio-economic status (Table 31) and age (Table 32) do not appear different in the service and no service groups.

Time of Service. Of the 31 percent of the total group of patients receiving service, 18 percent are in touch with an agency within the first 90 days and the remaining 13 percent make contact for service after 90 days from hospital discharge.

Table 27      Cases Not Receiving Services from Any Agency After Hospitalization  
and Corresponding Figures for the County and the Total Population  
of 1730 Patients by Six Demographic Variables: Sex

Sex	No Contact After Hospitalization		Hennepin County	Total Population
	<u>N</u>	<u>%</u>	<u>%</u>	<u>%</u>
Male	313	26.4	47	31
Female	872	73.6	53	69
Total	1185	100.0	100	100

Table 28 Cases Not Receiving Services from Any Agency After Hospitalization and Corresponding Figures for the County and the Total Population of 1730 Patients by Six Demographic Variables: Marital Status

Marital Status	No Contact After Hospitalization		Hennepin County	Total Population
	<u>N</u>	<u>%</u>	<u>%</u>	<u>%</u>
Single	204	17.1	21	22
Married	864	72.9	73	65
Divorced	44	3.7	3	7
Separated	32	2.7	1	3
Widowed	41	3.5	2	3
Total	1185	99.9	100	100

Table 29 Cases Not Receiving Services from Any Agency After Hospitalization and Corresponding Figures for the County and the Total Population of Patients by Six Demographic Variables: Hospital

Hospital	No Contact After Hospitalization		Hennepin County*	Total Population
	<u>N</u>	<u>%</u>		
State	99	8.4		16
Mpls. General	70	5.9		11
University	64	5.4		5
Glenwood Hills	536	45.5		40
Fairview	194	16.3		13
St. Mary's	222	18.7		15
Total	1185	100.2		100

\* County figures excluded.

Table 30 Cases Not Receiving Services from Any Agency After Hospitalization and Corresponding Figures for the County and the Total Population of 1730 Patients by Six Demographic Variables: Diagnosis

Diagnosis	No Contact After Hospitalization		Hennepin County	Total Population
	<u>N</u>	<u>%</u>	<u>%</u>	<u>%</u>
<u>Psychosis:</u>				
Involutional	57	4.8	4	5
Affective	64	5.4	5	5
Schizophrenic	247	20.8	28	20
<u>Psychophysiological</u>	10	0.8	-	1
<u>Neurosis:</u>				
Anxiety	151	13.0	11	13
Depressive	480	40.5	35	42
<u>Personality Disorder</u>	55	4.6	7	4
<u>Situational</u>	52	4.3	4	4
<u>Other</u>	69	5.8	6	6
Total	1185	100.0	100	100



Table 31 Cases Not Receiving Services from Any Agency After Hospitalization and Corresponding Figures for the County and the Total Population of 1730 Patients by Six Demographic Variables: Socio-economic Status

Socio-economic Status	No Contact After Hospitalization		Hennepin County	Total Population
	<u>N</u>	<u>%</u>	<u>%</u>	<u>%</u>
1	81	6.8	6	6
2	182	15.4	10	15
3	319	26.9	25	29
4	8	.7	1	1
5	327	27.6	33	31
6	102	8.6	19	11
7	37	3.1	6	6
Total*	1056	89.1	100	99

\*Excludes unclassified cases.

Table 32 Cases Not Receiving Services from Any Agency After Hospitalization and Corresponding Figures for the County and the Total Population of 1730 Patients by Six Demographic Variables: Age

Age	No Contact After Hospitalization		Hennepin County	Total Population
	<u>N</u>	<u>%</u>	<u>%</u>	<u>%</u>
18-19	31	2.6	6	3
20-29	223	18.8	26	21
30-39	344	29.0	26	30
40-49	326	27.5	23	26
50-59	242	20.4	19	20
60	19	1.6	*	"
Total	1185	99.9	100	100

\* Omitted.

### Patient Seen By Each Agency Within 90 Days

This is an account of the characteristics of the 18 percent of the patients who were seen within the first three months after discharge. The data appears in the Appendix.

Case Work Services. The Mental Health Unit of the County Welfare Board saw 36 percent of those patients seen during this period. The characteristics of this patient group were 69 percent schizophrenic and 79 percent from state hospitals. No doubt these referrals were largely part of the discharge planning of the state hospitals. The other characteristics reflect the state hospital population which is fairly evenly male-female. No other factors seemed outstanding.

Vocational Services. The four agencies offering vocational counseling or employment assistance saw many of the same patients. The Employment Services saw 32 percent of the group, the Division of Vocational Rehabilitation saw 21 percent, and Vocational Guidance Service and the Psychiatric Rehabilitation Project saw 5 percent each. These latter two sets of frequencies are too small to analyze.

The Employment Service patient group was half men and women, fairly frequently single or divorced (note the relative frequency of women), and a bit more often from the state or general hospitals rather than the private hospitals. In age, diagnosis, and socio-economic status they looked like the group as a whole. In essence, they look most typical but needing a job.

The patients going to the Division of Vocational Rehabilitation were much more chronic and severely involved. Sixty-eight percent came from the state hospitals and 67 percent were schizophrenic. They were frequently single (50 percent), male (56 percent), and younger. They were especially from the lower socio-economic status ranges. The contrast between these patients and the Employment Service patients is striking. They appear most like the Mental Health Unit clients.

Financial Assistance. The financial assistance given these clients during the first 90 days after discharge came from the Department of Public Relief which aided 36 percent. Unemployment Compensation aided 13 percent of the group. Two other units, Aid to the Disabled and Aid to Dependent Children aided the group 8 percent each.

The most frequent assistance, then, came as direct relief from the Department of Public Relief. This was to discharges of the state hospitals, 36 percent, or Minneapolis General Hospital, 51 percent, most typically. The group was diagnosed schizophrenic 47 percent of the time and personality disorder 26 percent of the time. This appears to be a group like the state hospitals' sample, but to some degree more often married or ex-married individuals, and more frequently women (57 percent).

The group getting Unemployment Compensation, for the most part, needs to have been working prior to hospitalization. These claimants were 59 percent men who came 50 percent of the time from the private hospitals or Minneapolis General Hospital (28 percent). Their diagnosis was most frequently depression (33 percent) or schizophrenia (28 percent). They were somewhat older than the sample, of middle socio-economic status, and most frequently married (56 percent).

The small number of patients served immediately (90 days) after hospitalization is still larger than the number served in all succeeding months. These patients, when given case work or vocational services, seem to be the most severely ill group with what proved to be the poorest vocational prognosis. Those patients receiving direct aid were possibly more adequate people, although more frequently with character problems.

#### Patient Reports of Vocational Status and Problems

The sample of patients drawn from the population was comprised of 348 cases. These cases were selected to represent specific subsamples of the

population. (See Table 1) The sampling emphasized the representation of chronic illness, longer hospitalization and tended to ignore the housewives who were not working.\*

#### The Sample Interviewed

The sample was questioned about employment status, personal income, and present symptomatology. The most detailed information was gathered from 139 members of the target sample. In addition, less information was collected from 94 persons who reported on their income and current vocational problems.

Sampling Error. The demographic data discussed above were available on all cases. The differences between patients interviewed and the target sample of 348 cases suggest that working women with multiple hospitalization and housewives with multiple hospitalization are poorly represented in the sample interviewed. By contrast, men were over-represented in the data. Yet, the age distribution of those surveyed is much the same in the target group and the sample except in the oldest (57-60) interval where sampling was inadequate. The interviewed sample was too frequently from a state hospital. In diagnosis the interviewed sample was much like the target group. No doubt other biases are obvious. The results that follow lack precision. They are treated as suggestive of trends. The reader should consider these results to be a pilot study report rather than a final report.

#### Length of Hospitalization and Vocational Adjustment

Patients who left the hospital within 0-19 days have been called "mildly ill". Those who spent 20 to 89 days in the hospital, and those who were in the hospital more than once during the year but less than 90 days, have been called "moderately ill". Patients discharged after more than 90 days in the hospital

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\*There is some reason to believe that work and psychiatric breakdown are negatively related among women; for the report on these findings, see LaPerriere and Briggs' Manuscript, 1963.

have been called "severely ill". This grouping presumes, a priori, that longer hospitalization is a sign of greater involvement. An examination of the vocational outcome of the cases at each length of hospitalization follows.

Employment Status (233 Cases). Few of the mildly ill men and women were unemployed in 1962. That figure is only slightly higher than the national rate of unemployment and of the rate in the Hennepin County area. In addition, an almost equal number of the mildly ill had been rehospitalized. Therefore, the number out of the labor market appears to be more than twice the national rate of unemployment. Among the moderately ill men and working women, about one-fourth were unemployed or had been rehospitalized. About 70 percent were either gainfully employed or occupied as housewives. Among the severely ill patients, more than half were either rehospitalized and/or unemployed.

Changing Social Status (233 Cases). The sample was asked if they had been employed prior to the first hospitalization. The level of employment was then compared with the present employment status. All of the changes were classified under three heads - Upward Social Mobility, Neutral Social Mobility, and Downward Social Mobility.

Among the men, even among the mildly ill men, more than one-fifth of the persons went downward during the three year period. For the severely ill, a third went downward. It is worth noting, however, that a small number of the severely ill managed to improve themselves. These two trends seemed plainly evident.

- 1) The employment rate of most male ex-patients tended to deteriorate in the three-year period,
- 2) The performance of the mildly ill was better than the more severely ill.

Income (139 Cases). We noted above that the psychiatric patients were found within the 1730 population to earn less than people in the county. In the sample interviewed the lowest incomes are most frequently reported by the severely ill and least frequently reported by the mildly ill.



Reported Effects of the Illness On Job Performance (139 Cases). The ex-patients were asked whether there were any effects from their illness and hospitalization which now limited them or had limited them on the job. Housewives were considered as an occupational group and their answers were recorded. Nineteen different symptoms were mentioned by the ex-patients. Several symptoms were reported by some patients. About 40 percent of the men, working women, and housewives reported symptoms and felt themselves not fully recovered or completely ready to give healthy, unhandicapped job performances.

Less than 30 percent of the mildly ill and moderately ill men, working women, and housewives had complaints but twice as many of the severely ill reported themselves handicapped in some way. When the employment and income records of the symptom free and the symptom carriers are compared, it seems that these limitations are strongly associated with low achievement. When the results are examined among the mild, moderately, and severely ill, the general pattern is not affected. Those reporting limitations have low achievement records compared to those who are symptom free, regardless of length of hospitalization.

Current Vocational Problems (139 Cases). The sample was asked whether they had any vocation problems at the present time. If the answer were affirmative, the ex-patients were further asked to describe their problems. Housewives and rehospitalized persons were eliminated from consideration on this question. Half of those patients questioned stated that they did have current vocational problems. No differences appear between the men, the working women, and employed housewives. More than a third of the mildly ill reported current problems; more of the moderately ill and nearly twice as many of the severely ill reported problems.

The most frequently occurring problem was finding a job which was high enough in status and interest. The second most frequent problem was a reported



deficit in training and education which prevented the respondent from doing well as he hoped. Eight of the nine persons who reported inadequate training for the existing job market were not high school graduates. Among those who are not high school graduates, over half (60 percent) report current vocational problems. Fewer (only 40 percent) of the high school graduates report them.

#### Diagnosis and Vocational Adjustment

The other predictor of outcome that was investigated was diagnosis. The two most numerous categories were depression and schizophrenia. In the target sample, the diagnosis schizophrenia made up 74 percent of the severely ill men, 57 percent of the severely ill women, and 47 percent of the severely ill housewives. The largest single group of the severely ill were schizophrenics. Within all groups (men, working women, and housewives), as severity of illness increases, the number of patients diagnosed schizophrenic increases. The greatest concentration of depressives is found among the moderately ill. Housewives have the greatest concentration diagnosed depression. Even among the severely ill housewives there are over a third who are diagnosed depression. By contrast, only 11 percent of the severely ill men are diagnosed depression, and no severely ill non-housewife women were diagnosed depression.

Employment Status and Rehospitalization Combined (233 Cases). Table 34 shows the rate of unemployment and rehospitalization in each of the major diagnostic groups. The results indicate that schizophrenia is the most severe diagnosis and that Adult Situational Reaction is the mildest. The one surprise, perhaps, is the very poor performance of those with Personality Disorders.

Even when length of hospitalization is held constant, the schizophrenic group consistently underperforms the non-schizophrenic group.

Change in Status. Table 34 gives the employment status in each of the nine diagnostic samples prior to hospitalization. Note that situational reactions are seen frequently to be involved in vocational problems. This group does

Table 34

Rate of Unemployment or Rehospitalization  
For Two Periods in Nine Diagnostic Groups

	Before Hospitalization (Unemployed Only)	After Hospitalization Unemployed &/or Rehospitalized
1. Situational	50	-
2. Schizophrenia	28	54
3. Affective	27	20
4. Personality disorder	8	50
5. Involution	8	17
6. Anxiety	7	7
7. Other, neurotic	7	13
8. Depressive	1	13
9. Other psychotic	-	50

very well. The net loss is greatest among the Personality Disorders, next among the Schizophrenic group. Involutional, depressive groups also lose in employment rates from the rate prior to hospitalization.

Individual Income (139 Cases). Housewives and rehospitalized persons are not considered. Those persons who are unemployed but who may be getting Social Security, relief, or unemployment compensation were included.

Among the specific diagnostic categories, only the schizophrenic and depressive groups occur often enough to be considered in detail. Some 80 percent of the schizophrenics were earning less than \$5,000 in 1962. On the other hand, 70 percent of the depressives were earning more than \$5,000. Clearly, the prognosis for the depressives on the variable of annual income (full or part-time work) is better than for the schizophrenics.

A comparison of the performance using employment status and income combined shows that the male schizophrenic group did most poorly within the patients called the severely ill (longest hospitalized). The severely ill men with non-schizophrenic diagnoses performed very creditably--70 percent were employed. On the other hand, the 30 percent of the severely ill schizophrenics were employed. Forty percent of the moderately ill schizophrenics were employed.

The poor record of the schizophrenic men is evident in the analysis of the income of men employed full time. The schizophrenic men as a group earn less than the severely ill men as a group. The severely ill non-schizophrenics outperform the severely ill schizophrenics. Interestingly, no schizophrenic men were found in the mildly ill group.

The severely ill working women do considerably worse than the schizophrenic women. When length of hospitalization was held constant and schizophrenic and non-schizophrenic working women are compared, the schizophrenic women do appear to underperform the non-schizophrenics.

### Reason For Unemployment

Apart from the two factors examined extensively, length of hospitalization and diagnosis, a set of more general factors were examined to survey reasons for unemployment. The 68 persons who were not employed or housewives were asked why they were not working. The interviewers assessed the response against the other facts known about the ex-patient and tried to assign an appropriate reason. Seven categories were used. The categories, the number of persons, and the percentage of sample (n=233) appear in Table 35.

At least three reasons (rehospitalized, mental disability, and personality inadequacy) cover 80 percent of the cases and suggest that emotional or character problems were the prime reason for unemployment. If those who were retired or had physical disabilities were added to the above group, there are some 87 percent of the unemployed whom are in no position to accept employment.

### Discussion

The three major purposes of the survey of psychiatric patients were to 1) establish a population of psychiatric discharges at which vocational studies could be directed, 2) describe this population by its discharge parameters, and 3) perform a preliminary survey of services and vocational problems among the group to parallel the treatment study reported in the third chapter.

These results suggest a number of factors that are significant or characteristic of subpopulations of the patient sample. Many of the findings are not of apparent clinical significance, while others seem at least to reflect clinically relevant phenomena.

The greater frequency of women in the hospitals with an apparent greater severity of the disorders among the men seems understandable. Mildly disturbed

Table 35

Seven Reasons For Unemployment at the Percentage of  
Occurrence in Two Samples, All Interviewed and All Unemployed

		All Interviewed (n=33)	All Unemployed (n=68)
1. Rehospitalized	34	14.6	50.0
2. Mental Disability	17	7.3	25.0
3. Laid off/quit or lost old job/has not relocated	7	3.0	10.3
4. Retired	3	1.3	4.4
5. Personality problems - inadequacy	3	1.3	4.4
6. Physical Disability	2	.9	2.9
7. Aid contingent unemployment	2	.9	2.9
	68	29.1	99.9

men are less often hospitalized.

It appears obvious too that persons who are poorly established in the community (e.g. single, without skills) tend to have the longest hospital stay, the severest diagnosis, and the most trouble finding employment later. This is especially true of men who are diagnosed schizophrenic, and who go to the state hospital. The case work and Division of Vocational Rehabilitation services are almost exclusively aimed at this group. The single unskilled schizophrenic man is the modal recipient of these services. The patients themselves are very likely to be far from recovered from their illness, and to complain of symptoms and of their marginal functioning capacity.

The second most seriously involved group of cases is typified by the personality disorder. These patients are most commonly municipal hospital patients who have had a short stay. They have more often been married. Their pre-illness vocational adjustment looks the poorest, and their post-illness vocational adjustment looks even poorer. The service they most typically receive is financial assistance from a relief agency. One may imagine that many other similar patients were excluded from the present survey because of an alcoholic diagnosis.

There seems to be a third degree of illness, which while impairing of subsequent functioning is more typical of older, better established individuals whose hospital stay is shorter and more often in a private hospital. These patients are often depressed. They are either established men who have skills or professions, or women who have been housewives. These patients receive little service from the community after discharge and are, if served, most frequently seen at the Employment Service or receive Unemployment Compensation. Examination of their subsequent adjustment suggests that there is a strong tendency for a loss of

status (or a failure to return to the pre-illness level of adjustment). They seem to retain some symptoms of their illness.

There remains a group of situational reactions whose problems prior to hospitalization are often vocational. They do very well after hospitalization. These patients receive almost no services from the community.

Within any one of the rough groupings listed above, there are exceptions, patients who do better or more poorly than (the group) might be expected. One is immediately concerned as to whether the patients who have fared better, have done so because of services they have received, or because of unrecognized strengths of their own. There is little evidence in these data to judge the effectiveness of the post-discharge assistance that was rendered.



### Chapter III

#### A Study of Factors Influencing Vocational Success Among Psychiatrically Disabled Patients

This research and demonstration project had many facets. The focus was scientific inquiry; yet, other major components were educational and demonstrative in aim. Only the broadest outline of what was done can be reported. In this report we have chosen to emphasize the factors that will make the reading of the results most meaningful. Thus, a scientific tone has been adopted; yet, we recognize that an emphasis on education, community development, or services rendered might have been equally worthwhile orientators. We hope that readers whose primary interests lie in the demonstration aspects of the report will also find this report interesting.

We have been concerned with services that comprised the treatment program. We have also studied the characteristics of patients who were successful in rehabilitation. During the total period of treatment 4,000 or more cases were reviewed by the staff as possible recipients of services, and some 250 individuals were included in the program. While we shall emphasize the treatment and control groups in this report, other subsamples are appropriately noted. There are three of these: the pilot study (PS) group of 27 clients, the University of Minnesota Hospitals (UMH) clients, 35, and a group of six clients who were referred by the Aid to Dependent Children Unit of Hennepin County Welfare Board.

### Procedures

The report of the Pilot Study program precedes in this report for it describes the formation of the experimental treatment program. The subsequent sections report the final clinical and experimental procedures. There is, in addition, a report of the characteristics of cases served as compared to the population from which the patient samples were derived.

Pilot Study - January 1 - June 30, 1960

#### Objectives

There were several major purposes for conducting this phase of the project: to provide the staff with an opportunity to gain experience with emotionally disturbed clients, to develop workable routines for supervision and consultation with other staff members, and to orient staff to both the clinical and research requirements of the study.

The orientation functions of the pilot study included the establishing of good working relationships between the new project staff members and the other staff of the Department of Physical Medicine and Rehabilitation (PM&R) and integration of project services with existing PM&R Services. The orientation function extended beyond our own hospital staff to other community agencies and participating hospitals and included primarily the establishment of referral procedures, reporting systems, and general lines of communication. There were also many important administrative details to be worked out during this six-month period. Methods for keeping records, handling staff conferences, admitting and discharging clients, and so forth, were developed.

Finally, we needed to test the appropriateness and effectiveness of the various forms, rating scales and intake tests which had been devised and

selected for use during the planning phase, and the criteria for admission to the project.

### Referral Procedures

Prior to the beginning of the pilot study, procedures for referring clients to this study had been discussed with the cooperating agencies, University of Minnesota Hospitals (UMH), Minneapolis General Hospital (MGH), Mental Health Unit of the Hennepin County Welfare Board, and three State Hospitals, and an agreement had been reached as to a workable system.

The original plan placed the burden of referral with the caseworkers at the cooperating agencies. The project coordinator screened the active files of the agencies and discussed the various cases that were eligible as a demonstration to the agencies. It was expected that the project staff would be able to discontinue screening the charts when agency caseworkers became better acquainted with the types of patients who were eligible. The workers then discussed our service with those clients who were appropriate. If the client were interested, the worker forwarded referral forms to us.

The first step was the intake interview. This interview was conducted at the University or in the referring agency, whichever was more convenient. Among the supplementary purposes of the interview were, 1) to give the client further information about our service, 2) motivating him to become involved, and 3) securing from him releases for obtaining information from other agencies with whom he had worked or was working. The questionnaire completed at that time was designed to gather eight basic types of information, marital, educational, vocational, social, parental, religious, legal, and a history of hospitalization. The final form of this interview appears in Appendix B.\*

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\*Unless otherwise stated, all references in this Chapter are to Appendix B.

Upon completion of the intake interview, an appointment was made for completion of the test battery which has been standard throughout the study. The tests were administered at the University Hospitals by a psychometrist. Arrangements were also made to secure an up-to-date medical report. It was the aim of the staff to add four new subjects to the study each week.

### Planning Treatment

The case was presented at a staff conference when all of the intake, medical, and test data were complete. The intake staff conferences were held once a week for two hours. They were attended by the clinical psychologist (one of the principal investigators), the psychiatrist, two vocational counselors, the prevocational therapist, and the research coordinator. The intake conference fulfilled several major functions. First, since all intake interviews were conducted by the research coordinator, the conference provided an opportunity for the rest of the staff to become acquainted with the case. Second, psychometric and historical data were analyzed and the staff agreed upon a feasible vocational program for the client, with each member of the team contributing his specialized knowledge of his field. Third, the conference also served as an additional screening device in two respects: possible questions of eligibility were decided and the problem of appropriateness for the service was considered (i.e. did the subject really have a vocational problem or was he perhaps too ill to benefit from service?).

Since no control group was used during the pilot study, all eligible and appropriate referrals received service. The ultimate goal for each patient was remunerative employment and all treatment programs were related to the goal of employment, whether competitive (part- or full-time) or sheltered (workshop, homecraft, etc.)

There were six major groups in which a patient could be classified at the time of the staff planning conference; five of the groups were concerned with treatment, and the sixth with evaluation prior to treatment: 1) Sheltered employment, 2) Direct job placement, 3) Training, 4) Counseling into employment, 5) Delayed decision, and 6) No service and rejection.

Each client was then assigned to a counselor. The counselor, once assigned, became the coordinator of the treatment program for his client.

#### Patients Treated and Results

Twenty-seven patients were accepted from the three referring agencies: University of Minnesota Hospitals, Minneapolis General Hospital, and Mental Health Unit. The mean age of the group was 36, while the median age was 33 years. Over half, 15 out of the 27, were single. Formal education ranged from eight to 17 years, with a mean of 12 years. The median IQ was 103. Prior to acceptance in our study, the median number of days spent in the hospital for emotional problems was 252.

Eleven of the 27 subjects carried the clinical diagnosis of psychoneurosis, while 16 were diagnosed as psychotic. The most frequent psychoneurotic diagnosis was depressive reaction, while the most frequent psychotic diagnosis was paranoid schizophrenia.

Of the four treatment categories, counseling into employment and employment via training were the most frequently selected goals, with 13 and nine persons in each, respectively. Terminal sheltered employment, was the designated goal for only one person, while four were judged ready for direct placement.

The prevocational workshop was used as a means of evaluation, training, or therapy for 17 of the 27 subjects.



Although terminal sheltered employment was the designated goal for only one person, four others were felt to be feasible candidates for sheltered work adjustment programs and were assigned to local workshops. From the experiences encountered in attempting to coordinate sheltered programs with the project treatment program, it became apparent that this form of treatment adjunct would not be workable in future cases. The use of sheltered workshops proved unsatisfactory because of difficulty in being able to obtain sheltered work at the time it was needed, and of the type that was needed. Further, the shops were unable (at their own admission) to provide the supervision needed to be able to provide our staff with the particular information desired. In addition, lack of work contracts caused frequent layoffs which raised additional problems.

Patients were discharged from the active treatment program as their status changed relative to employment or employability.

Over half of the subjects were designated as treatment successes, with 13 being employed full time and two engaged in a full-time school program. Six clients were unemployed and did not hold any employment while in our program. Five were rehospitalized and one person received no treatment as he decided early in his program that he was not interested in our service.

Our staff continued to work with, and to follow, these patients, even after the beginning of the experimental phase. As of July 1, 1962, two years from the end of the pilot study period, there were still nine patients (33.3 percent) engaged in full-time competitive employment.

#### Final Clinical Procedures

Experience during the pilot period of six months indicated certain necessary changes in procedures. These largely involved the institution of casefinding methods and formalizing the case acceptability criteria. The

treatment program developed in the pilot study period was modified only insofar as clinical experience is a major determinant of the form of therapy.

#### Criteria of Case Acceptance

Some clarification in the statement of criteria for acceptance resulted from the pilot study experience. The final statement of these criteria are as follows.

- 1) Men and women between the ages of 18 to 60 inclusive.
- 2) Residents of Hennepin County
- 3) Patient was determined to have a vocational problem, i.e. unemployment or unsatisfactory employment due to current or previous emotional problems.
- 4) A measured Intelligence Quotient of 80 was required, but if our testing showed an IQ of 75 or more, the patient was accepted.
- 5) A primary diagnosis of psycho-neurosis or functional psychosis, or possessing psychiatric or emotional problems demonstrably severe enough to constitute a handicap to employment. Excluded from the study were patients with a primary diagnosis of psychopathic personality disturbances, drug or alcoholic addictions, or who were judged to be a danger to themselves and/or society. An attempt was made not to exclude candidates because of the severity of their illness.
- 6) Excluded were patients who had a physical disability which would serve as a handicap to employment.
- 7) All patients had to have been discharged and released from the referring hospitals prior to being accepted as subjects in the study.



### Casefinding

The staff had initially planned to admit approximately 100 clients each year during the two year experimental phase of the study and eventually did admit a total of 187 clients.

It became evident that many problems would have to be resolved in order to insure such a flow of referrals. Thus, the members of the project staff took a more active role in seeking referrals and so the emphasis shifted from "referral" to "casefinding".

One of the major complicating factors in the casefinding procedure was the attitude of the agency personnel towards rehabilitation of the emotionally disturbed. The majority of caseworkers in the agencies were "service oriented" and were not sympathetic to the need for a control group. To them this meant that their clients were being subjected unnecessarily to another possible "rejection". Caseworkers also objected to the fact that the control subjects were randomly selected. This seemed an unwarranted gamble with their client's vocational future. Due to this control group factor, several agency workers were unwilling or reluctant to refer cases to us.

Another problem was the misinterpretation on the part of the workers at the agencies towards the facilities of the University Hospitals. Expectations ranged from the concept of "job placement" to just a "testing service". Informing the agency personnel of the project was one of the least adequately handled parts of the project. Considerable time in conferences did not seem to better the situation. This was a block that had not been anticipated at the inception of the project and eventually had to be handled at the level of personal relationships rather than by community education.

In order to overcome these problems it was found that the counselors had to personalize their relationship with the individual workers. A great

deal of time was spent in going through files and going over the current caseloads of the referring agencies. In this way the counselors were able to point up possible vocational services to the caseworkers. This "free advice" was designed to solicit and obtain rapport with the various agencies. Also, in-service training sessions were made available for the agencies' staffs. The staff meetings were open to workers wishing to attend, particularly the agency workers involved. There was minimal attendance of referring workers.

Personalizing procedure helped to enhance the relationship between the workers and the casefinders and also to increase the number of referrals. It also served to decrease the number of inappropriate referrals. A further consideration was that the casefinders were able to pick up other cases whom the agency workers had not thought of referring for various reasons. In this context the agency's inactive files were used for possible referral leads. This involved overcoming administrative rules and a personal resistance. Permission to go through these files was obtained and it was made quite clear to the various agency workers involved that we were not "reactivating" old cases, but rather giving service to people in need.

As more time and effort were devoted to this aspect of the study, it became necessary to assign the counselors to a regular casefinding program. Two of the counselors became casefinders devoting approximately one day of each week to this process. In this manner information on more than 3500 cases was reviewed. One hundred and eighty seven clients were admitted as subjects in the study and 169 clients finished the study.

#### Intake Procedures

The initial interview. The casefinder, in the role of vocational counselor, arranged to interview the client after screening and referral.

This interview was conducted either at University Hospitals or, more often, at the referring agency. The interviewer tried to accomplish certain purposes during this interview. First, the client had to be informed of the referral to the project, and accurately apprised of the services that might be offered. This involved explaining about evaluation, counseling, and the fact that this was not an employment service. The client often needed to be reassured that any kind of activity would wait upon his feeling of readiness. Second, the research and experimental-control group possibilities were explained as was the fact that the client's desires, and our recommendation would be referred back to the agency if he fell in the control group. Third, if the client assented to the referral, forms for release of information were signed. Fourth, the intake interview questionnaire was completed and the client was observed for rating his qualities on certain vocational items. (See Appendix) Finally, the client was given an appointment for testing and for a physical examination, if the referring agency was not able to provide an acceptable, up-to-date physical examination report.

Psychological test battery. This battery consisted of a personality inventory, the Minnesota Multiphasic Personality Inventory (MMPI), vocational aptitude tests, the General Aptitude Test Battery (GATB), an intelligence test, the Wechsler Adult Intelligence Scale (WAIS), a reading test, the Gates II, an arithmetic test, the 100 Problem Arithmetic Test, and the Interest Check List. The testing was usually completed during a two-day period. Few, if any, clients complained about the tests, and no one quit during testing.

Staff conference. All patients completing the test battery were presented to the staff. The staff conference served to acquaint the psychiatric

consultant, the clinical psychologist and the entire vocational counseling staff with the full case folder. The staff then discussed the case, and treatment plans were made following the seven general alternatives noted in describing the pilot study. Those cases from beyond University Hospitals were then randomly assigned to the treatment or control groups. If the case fell into the control group, a record of testing and staff recommendations was relayed to the referring agency and the case was closed. If treatment was to be instituted, the patient was given an appointment and the referring agency was notified of our decision.

#### Treatment Program

Counseling. Each experimental and each University of Minnesota Hospitals patient was assigned to a vocational counselor who was, from the viewpoint of the patient, the coordinator of his rehabilitation program. The counselor provided the traditional services associated with that discipline and was responsible for keeping the other staff members informed of the patient's progress.

The services available to the client consisted of combinations of counseling, psychological testing, work evaluation, work adjustment therapy, group therapy, training, job seeking assistance, referral, follow-up, and coordination of the patient's program with other cooperating community agencies.

These services were not essentially different in kind from the traditional vocational services offered by rehabilitation centers and agencies, but perhaps they were different in degree. For instance, all services were rendered on an intensive and extensive basis. Counseling approaches ranged from the giving of occupational information to supportive psychotherapy. The emphasis of the entire treatment program was focused

upon preparing the individual to seek and enter the most appropriate level and line of work possible for him. The work evaluation unit in many cases was used on a daily basis for periods of up to one year; serving both as a simulated work situation and a protective therapeutic work environment conducive to personal and work adjustment. Seldom was pressure put upon the client to leave the program until he indicated through his own desires that he was ready to do so.

Typically, the vocational counselor saw his patient at least once a week. It should be noted that some of the more severely disturbed clients were seen three times per week for periods ranging up to one year. Those clients who were in the workshop, group therapy, or involved in further testing had additional weekly contacts with other members of the staff.

The counselor began his contacts with the client by interpreting the results of the initial evaluation and by encouraging the client to discuss his vocational goals. The counselor made a further appraisal of the client's needs and began to implement the program established at the intake staff conference. A supervisory conference seminar was held once each week to provide the counselors with a regular opportunity to review their cases with the other members of the staff.

The team approach used in this setting perhaps differed from the team approaches used in other settings. The client in this program viewed his counselor as the coordinator of his program. The client viewed the other members of the team as persons who contributed specialized services as a supplement to the counseling program.

Prevocational Workshop. The most frequent service available to the client, in addition to vocational counseling, entailed the use of the Prevocational Workshop and its personnel. The Workshop contained the



equipment necessary for activities in bench assembly, mechanical repair, metal and woodworking activities, office clerical work, office machines, and paper and pencil activities, etc. The staff included two therapists (or work supervisors), an occupational therapist, and a manual arts therapist.

A total of 52 clients were assigned to the Prevocational Workshop as a part of their treatment program and these clients received a total of approximately 6500 hours in the Shop. In 28 cases the prevocational assignment was made for purposes of evaluation. Nine patients used the Shop primarily for therapeutic reasons and six clients were assigned for training. Combinations of the above purposes resulted in nine more complex uses of the Workshop.

In November of 1960 as an adjunct to the treatment programs, group therapy sessions were made available for selected clients. Only those clients who were judged to be ready to begin job seeking activities were invited to the group. Sessions were conducted by the staff psychiatrist once a week. The purpose of this aspect of the program was to involve the clients in a supportive group therapy and to allay anxiety in reference to vocational problems. In addition, further information was obtained which was used in continuing to plan the client's program. The information which the client obtained from the group provided excellent content for subsequent counseling interviews, and vice versa. A total of 21 clients attended group therapy sessions for a total of 85 hours. The average number of clients attending each session was four.

As individual clients progressed through their treatment program, other rehabilitation and community services were used when appropriate. For the clients who were prepared to enter specific training programs designed to provide them with saleable skill levels, referrals were made to the State

Division of Vocational Rehabilitation to assist in the implementation of the program by underwriting the financial costs of tuition, books and supplies, and, at times, maintenance monies. The administrative arrangements with the Division of Vocational Rehabilitation were established at the outset of the study. The mutual agreement between agencies was that all referrals to the Division of Vocational Rehabilitation must meet their standard eligibility requirements for service, and that counselor responsibility for referred clients would remain with our staff counselors. A total number of 22 experimental clients were jointly served through the Division of Vocational Rehabilitation and this project. Twenty clients were referred to the Division of Vocational Rehabilitation and two clients were referred by the Division of Vocational Rehabilitation.

The staff's philosophy regarding "job placement" was that through counseling and other treatment adjuncts, a client should be brought to a level of independence sufficient to enable him to seek and find his own job. Because none of the clients suffered mobility problems, there were no physical limitations necessitating direct assistance by the counselors. When the feelings of the clients and staff suggested that the client had made satisfactory and sufficient progress in his program, that he was "ready" to enter employment, he was given suggestions as to where he might apply for appropriate work. When necessary, suggestions were made as to appropriate manner of dress and ways of presenting past work and medical history. On occasion transportation for the client in his job seeking activities was provided through the issuance of bus tokens.

The need for transitional experiences in sheltered workshops for certain clients became evident rather early in the study. Clients assigned to the Prevocational Workshop expressed dissatisfaction with "simulated" work tasks,



and further complained of lack of reimbursement for work performed. The inability to provide "real" work for which the client could be paid proved to be a severe drawback to the use of the Prevocational Workshop. However, attempts to extend the treatment program to include a more gradual transition into employment through the use of local sheltered workshops were largely unsuccessful. Because of the negative experiences encountered with sheltered workshops during the pilot study, the staff deferred assigning clients to this treatment adjunct, even though it was felt that a workshop was indicated and that the client was in need of such transitional experiences. While sheltered employment was suggested for 13 clients, only two clients made use of sheltered workshop adjustment training

### Subjects

The patient sample that was served in this study is described demographically here. This sample came from a population that meets the criteria for admission, but which of many samplings and other reality factors did not come for services. Therefore, there is a unique quality to the sample that we worked with which is not exactly known and could not be expected to be duplicated in succeeding studies.

The referring agency and the group into which the client fell within the study appear in Table 1. The experimental group of 74 clients received the treatment outlined in the previous section. They were selected for treatment randomly. The control group of 60 clients could as well have been treatment cases, but for the results of randomization. The 35 cases from the University of Minnesota Hospitals were given the same treatment, but differ from the former groups because of their uniform origin and the absence of any comparable cases in the control group. (The six cases in the Aid to

Table 1

Sources and Numbers of Referrals

Agency	UMH	Experimental	Control	All Groups
University of Minnesota Hospitals	35	-	-	35
Minneapolis General Hospital	-	19	20	39
Hennepin County Welfare Board	-	19	19	38
Minneapolis VA Mental Health Clinic	-	3	1	4
St. Cloud VA Hospital	-	8	5	13
Vocational Guidance Service	-	17	11	28
Family and Children's Service	-	3	1	4
Private Referrals	-	5	3	8
All Referrals	35	74	60	169

Dependent Children sample were a demonstration set of cases without psychiatric involvement. They are not included in the subsequent comparisons and do not appear in Table 1.)

Hospitals rank first as a referral source. These hospitals were University of Minnesota Hospitals; Minneapolis General Hospital, a public municipal hospital; Minneapolis Veterans Administration Hospital, a general medical and surgical hospital; and the St. Cloud Veterans Administration Hospital, a chronic neuro-psychiatric hospital. These agencies contributed 53 percent of the total referrals. Welfare agencies rank second as a referring group. The Municipal Relief Agency maintains a professionally staffed Vocational Guidance Service and these referrals were made by counselors of that agency while the Hennepin County Mental Unit is staffed by social workers. All referrals from state hospitals were routed through the Mental Health Unit so that some social service could be established at the outset of treatment. Thus, these clients are counted as Mental Health Unit referrals. The two agencies differ considerably because relief payments are made directly by the former, while the Mental Health Unit operates more as an after-care unit and only participates in establishing relief under the categories of Aid to Dependent Children and Aid to the Disabled.

A final 7 percent of the referrals originated spontaneously from private psychiatrists or from the Family and Children's Service, a Red Feather agency.

#### Demographic Characteristics of the Sample

Comparison with Psychiatric Population: In order to better place the present study sample, it has been compared on certain demographic factors to a population meeting the same criteria. This is the population of 1730 patients who made up the entire population of psychiatric patients discharged into Hennepin County during the period July 1, 1959 to June 30, 1960, who met the

criteria in age, diagnosis, and county residence that this sample meets. The sample that we served and studied was referred, had been hospitalized in a particular kind of hospital, and had certain demographic and diagnostic characteristics that are comparable to the population.

In presenting these data, it is possible to draw comparisons with the population of psychiatric patients from the Hennepin County area, from which the sample was drawn.

Age. The sample ages ranged from 18-60. The mean age for our sample was 38 years; the mean age for the population was 3<sup>rd</sup> years.

Sex and Marital Status. Table 2 gives the percentage of patients in our sample and in the baseline population distributed by sex and marital status. The sample is almost equally men (55 percent) to women (45 percent), while in the population there are half as many men (31 percent) to women (69 percent). The different trends in marital status are also striking. Within each of the sex groups there are clearcut differences in frequency of married individuals. Thus, in the over-all population of psychiatric patients, marriage is the modal group (men 59 percent and women 67 percent). In the sample it is strikingly less frequent (men 29 percent and women 8 percent). This is the major difference between the groups, although there are others that are noteworthy. Though the absolute frequencies are small, widowed individuals more frequently appear in the sample. It is obvious that there must be more single individuals in the sample, since so few are married.

Diagnosis and Type of Hospital. Table 3 presents the percentage of patients discharged from four types of hospitals and the diagnosis given, for the sample and for the baseline population. There is a degree of non-comparability between the sample, in which there are Veterans Administration

Table 2

Marital Status of Male and Female Psychiatric Patients in the Study  
Sample of 169 Cases and in Comparison Population of 1730 Patients,  
Expressed in Percentages

Marital Status	Male		Female	
	<u>Sample</u>	<u>Pop.</u>	<u>Sample</u>	<u>Pop.</u>
Single	60	29	53	17
Married	29	59	8	67
Divorced	1	6	1	7
Separated	3	4	7	3
Widowed	6	2	32	5
All Percents	99	100	101	99

Table 3

Percentage of Patients Discharged From Four Types of Hospitals and the Diagnosis Given, for the Sample of 169 Cases and the Population of 1730 Patients

Diagnosis	Type of Hospital									
	State		Municipal <sup>a</sup>		VA and Other <sup>b</sup>		Private		All Hosp.	
	Sample	Pop.	Sample	Pop.	Sample		Sample	Pop.	Sample	Pop.
<b>Psychotic</b>										
Involuntional	0	.8	0	.8	-		0	2.3	0	3.9
Affective	.5	1.3	1.2	.6	-		0	3.4	1.7	5.3
Schizophrenia	24.3	12.0	18.9	5.0	10.0		8.8	10.6	62.0	27.6
Other	-	.4	-	.3	-		-	1.0	0	1.7
Psycho-physiological	-	-	-	.1	-		-	.7	0	.8
<b>Neurotic</b>										
Anxiety	0	.2	0	.2	1.2		.5	10.4	1.8	10.8
Depression	1.2	.4	5.9	2.9	0		2.4	31.8	9.5	35.1
Other	-	.2	-	.4	-		-	3.0	0	3.6
<b>Personality</b>										
Trait	.5	.2	8.3	3.9	1.2		6.5	1.2	16.5	5.3
Other	-	.5	-	.9	-		-	.8	0	2.2
Situational	0	.1	-	.3	0		0	3.2	0	3.6
Other	1.8	-	2.4	-	1.7		2.4	-	8.3	0
All Diagnoses	28.3	16.1	36.7	15.4	14.1		20.6	68.4	99.8	99.9

<sup>a</sup>Includes University of Minnesota Hospitals

<sup>b</sup>Cases from VA Hospital were not included in the population.



patients, and in the population which has no record of Veterans Administration cases. Yet, certain obvious differences are present and certainly are reliable regardless of this hiatus in the data. There are about six times as many private hospital patients in the population as there are in the sample. In a complementary way, the state and municipal hospitals contribute proportionally more cases to the sample than to the population.

The major difference between the two groupings diagnostically is in the greater presence of patients with schizophrenic diagnoses in the sample, in which 24.3 percent are so diagnosed, as opposed to the population, in which 12.0 percent are schizophrenic. Other diagnoses of a less serious nature are more frequent in the population.

Occupational Level Prior to Hospitalization. Table 4 presents the percentage of individuals at five social class levels for the population of psychiatric patients and the sample. It is quite clear that these are very different distributions. Among women, the employed women are more likely to be professional or managerial in the population (or else, of course, housewives). The sample referred for treatment had been clerical, sales, or service workers predominantly. There were few married women, it will be remembered. Among the males, clerical-sales or unskilled individuals were more frequently referred for service, while the population was more largely professional-managerial and skilled or semi-skilled. These results suggest that psychiatric breakdown occurs with different frequencies in different occupational groups, or that vocational re-entry is vastly more difficult in the less skilled vocations after a psychiatric illness.

Table 4

Percentage of Patients at Different Occupational Levels Prior to Hospitalization  
in the Sample of 169 Cases and the Population of 1730 Cases

Occupational Level	Female		Male	
	Sample	Population	Sample	Population
Professional-Managerial	9.2	16.9	13.0	23.4
Clerical-Sales	52.8	36.1	25.9	14.7
Skilled and Semi-Skilled	-	-	10.8	30.5
Unskilled	-	-	48.6	18.8
Service	23.8	14.9	-	-
Other (NR or unclass.)	14.5	32.0	2.2	12.6
All	100.3	99.9 <sup>a</sup>	100.5	100.0

<sup>a</sup>Excludes 655 housewives.

## Results

This section presents in detail the data which were collected, as they pertain to the central questions in the study. The first section investigates the data from the final evaluation, which are then used as criteria. The second section examines the intake information and psychometric data as they relate to the criteria. The third section examines the effects upon the criteria of the treatment program that was offered. The fourth section presents a composite of factors related to treatment in the form of a scale.

### Criteria of Vocational Adjustment

The final summary of the client's performance included a weekly record of activities from the time of the intake interview to the final evaluation. At the final evaluation ratings were made of vocational, social, and psychiatric factors. In addition, some ratings were also made of the client's broad social adjustment and his attitudes toward work.

### Final Ratings Procedures

Cases rated. The final rating for each client was scheduled to allow a maximum of time from intake. At least six months were required. Three groups, one with six months, one with 12 months, and one with 18 months, were established.

For their final evaluation 112 clients came to the University Hospitals and 29 clients were seen in their homes. Sixteen were in the hospital, and three clients were seen elsewhere. In addition, adequate final ratings were obtained by corresponding with three clients who were out of town, three clients were rated by hospital personnel out of the state, and relatives

provided adequate data on three clients who were not personally evaluated.

Of the psychiatric patients who were accepted for service four have been omitted from further consideration for the following reasons: one died during treatment and three were totally lost. Table 5 presents these data. Table 6 summarizes for the reader the number of cases in the treatment group, the control group, and the unmatched treatment group who were evaluated at approximately 18, 12, or 6 months.

Instruments. Counselors and research assistants conducted the final evaluation of each client. The instruments used on the final evaluation were the Wittenborn Psychiatric Rating Scale (12), the Mandel Scale of Social Adjustment (4), and a set of vocational counseling ratings (See Appendix). The clients completed the Hoppock Job Satisfaction Questionnaire if they were employed (2). In addition, a weekly account of activities since intake was made.

The data obtained from the final evaluation were divided into two types. The first type was information which was a direct report of vocational and social success since the time of discharge from the hospital. These factors are referred to as the "hard core items." Ten such items were studied. The second type of data was aspects of personal and intra-psychic adjustment, which have been called "inferential criteria".

#### The Hard Core Items

Two hard core items are derivatives of the information describing the weekly activities of the client. The activities from the date of intake to the date of final evaluation were evaluated for each week. A working week was three full days or more. The evaluation entailed classifying each week into one of nine possible alternatives. There were six weekly classes that

Table 5

Location of Final Interview or Reason For No Final Interview

Interviewed	
Rehabilitation Center	112
Their home	29
In psychiatric hospital	16
Other	3
	<u>160</u>
Not Interviewed	
Out of town	3
In psychiatric hospital out of town	3
Unreachable, informative relatives	3
	<u>9</u>
Total	<u>169</u>

Table 6

Number of Weeks Between Intake and Final Evaluation  
Interview and Subject Group

Anticipated Follow-Up Period	Number in Treatment Group			Median Weeks
	Treatment	Control	Unmatched Treatment	
18 months	34	27	19	83
12 months	15	16	5	53
6 months	23	16	10	29
Lost	2	1	1	-
Totals	74	60	35	165

were considered achievements: employed full time, employed part time, enrolled in school full time, a combination of school and employed, on-the-job training which included sheltered training and sheltered employment full time. The remaining three classes were: unemployed in treatment, unemployed not in treatment, and rehospitalized for emotional problems. There was an additional category which was used when the client was either permanently or temporarily removed from research consideration. This was used only when clients had been rehospitalized for non-psychiatric reasons, when women in the study married and became full-time housewives or when a client died. Married women or women who had families at the time of intake were not included in this group even though they continued to function as housewives. The clients in this category were not included in the computation of the percentage of time in achievement or in employment. Table 7 is the frequency distribution of percentage of weeks in achievements, the first hard core criteria. Clients were divided into three groups representing zero, low, and high percentages of time-involved achievement. There were 45 people who in no week were noted to achieve in any of the six ways. These were classified as the "zero" group. Persons who spent between one and 50 percent of their time in achievement constituted the "low percent" group. There were 64 people who were so classified. The final category was composed of 60 people who achieved over half of the total possible weeks between intake and final evaluation. They were considered the "high percent" group.

The second hard core criterion is percentage of weeks in full-time employment. This is the ratio of the number of weeks of competitive work to the number of weeks from the date of intake to the date of the final evaluation, exclusive of periods of nonavailability as noted. The clients were divided into three groups for analysis of the data. The first group of



Table 7

Percentage of Time in Achievement, Distributed by Deciles

Percentage of Weeks in Achievement		Frequency	Cumulative Frequency
0	(zero)	45	45
1 - 10	(low)	15	60
11 - 20		17	77
21 - 30		7	84
31 - 40		16	100
41 - 50		9	109
51 - 60	(high)	9	118
61 - 70		9	127
71 - 80		13	140
81 - 90		10	150
91 - 100		19	169

Table 8

Percentage of Time in Full-Time Employment Distribution  
By Deciles

Percentage of Weeks in Full-Time Employment		Frequency	Cumulative Frequency
0	(zero)	71	71
1 - 10	(low)	18	89
11 - 20		22	111
21 - 30		9	120
31 - 40		9	129
41 - 50		7	136
51 - 60	(high)	5	141
61 - 70		6	147
71 - 80		6	153
81 - 90		7	160
91 - 100		9	169

71 clients never obtained full-time competitive employment. They made up the "No Full-Time Employment" group. The second group of 52 clients worked no more than one-third of the weeks between the date beginning service and the final evaluation. These were considered the "Low Full-Time Employment" group. The remaining 46 clients were engaged in full-time competitive employment more than one-third of the weeks between intake and the final evaluation. These were placed in the "High Percent Full-Time Employment" group.

Third, rehospitalization during the study. This criterion records whether or not the client was rehospitalized for psychiatric reasons after the date of intake. The subjects were divided into two groups, with 134 persons who were never hospitalized during this time comprising the one group. The second group consisted of 35 who had been rehospitalized, regardless of the length of time in the hospital.

Fourth, the relief status at the time of the final evaluation. Any form of public assistance was included in this category. The 47 clients receiving assistance at the time of the final evaluation were considered in the "On Relief" group. Clients who either had never been on relief or who were not on relief after starting treatment constituted the "Not On Relief" group. There were 110 clients in this group. Since the Veterans Administration compensation is of a different type than the other forms of public assistance, the seven clients in this group were included with the five who made no response. These 12 were excluded from the analysis when this criterion was used.

Fifth, employed at the time of final evaluation. The Mandel Scale of Social Adjustment items which were selected for inclusion into the hard core item category were those in the occupational adjustment section. The questions dealt with the hours worked, the regularity of work, the stability

of job holding, inter-personal relationships on the job, attitude toward employment, education, achievement and attendance, inter-personal relationships in school, and attitude toward education. Not considered were the classifications of housewife, retired persons and the unemployed. The first item of the Occupational Adjustment Scale dealt with the number of hours worked while the remaining questions dealt with degree of success and stability on the job. The group was dichotomized to separate employed clients from unemployed clients. (See Appendix) There were 96 clients unemployed and 73 clients who were employed at the time of follow-up.

Sixth, Hoppock Total Raw Score. The Hoppock Job Satisfaction Questionnaire consists of four sections which are answered by the client. The questions asked deal with how well the client likes his job, how much of the time he feels satisfied with his job, how he feels about changing his job and how he thinks he compares with other people. The total raw score is the sum of points from the four preceding topics. Fifty-nine clients were given the Hoppock of the 73 who were employed. These 59 clients were divided at the median raw score (19 points) into a "High Job Satisfaction" group and a "Low Job Satisfaction" group.

Seventh, following job leads. This item was applicable to the 96 clients who were unemployed at the time of their final evaluation. Included in the "Not Applicable" category are people who were working either full or part time in competitive or sheltered workshops, those who were in school, and those who were involved with on-the-job training. Rehospitalized patients were considered as part of the unemployed group and were included in the analysis. The question was asked, "How active have you been looking for work this past week or so?" This was an item in the final evaluation interview conducted by the counselor. The 19 clients who had followed several, few, or one job

lead were combined into the "Looking" group. The 77 clients who did not have any leads that week were put into the "Not Looking" group. Those 73 clients who made no response were not included in the analysis.

Eighth, up or down grading of salary. This was considered a measure of employment success within the employed group of subjects. The item "Is your present salary level more or less than you have earned in previous jobs?" was included in the final evaluation interview conducted by the counselor. If the present salary was the same or above what had been earned previously, this was considered "Same or Higher Level Salary." If it was below what had been earned previously, these people fell into the "Down-Graded in Salary" group. Twenty-eight clients had increased their salary level from previous jobs or maintained the same salary. There were 29 clients who received less pay than before and 112 who were either unemployed or were not able to supply the needed information. The item was discarded from further consideration because of the small number of clients to whom it applied.

Ninth, salary level. This item is relevant only to those clients who were employed full or part time. This refers to the money the client earned as a result of employment. The clients were divided into two groups at the median. Clients with a salary of less than \$3,000 were considered in the "Low Salary" group. Those with a salary of \$3,000 to \$9,999 + were in the "High Salary" group. Not included in the analysis of this item were those who were unemployed for whom there was insufficient information. This item was also discarded because of the small numbers in the different categories.

Tenth, objectively successful. The interviewer rated the client on a five-point scale concerning his success. (Item 2 of Vocational Counselor Rating Scale in Appendix.) The judgment was made on the basis of the final

evaluation interview. Those clients who were rated on the item as "true or somewhat true" were grouped. Those who were rated as "somewhat false and false" were grouped. These latter persons, together with the ones who fell into the "both true and false" category, comprised the "Unsuccessful in Occupation" group. People who had been rehospitalized were considered in the false group instead of the not applicable or no response category. (The distribution appears in the Appendix) This item was not subjected to further analysis because of its close relationship to the occupational status item on the Mandel (criterion 5 above).

#### Relationships Among the Hard Criteria

Seven of the items described above were studied jointly. Each item was either dichotomized or trichotomized as indicated, and then distributed with each of the other six items. A matrix of the relationships between the hard criteria appear as Table 9. This table presents the Chi square values for each pair of criteria. The relative interdependency or redundancy in the criteria is striking.

The three achievement items, percentage of full-time work, percentage of time in achievement, and working at follow-up (Mandel occupational, education), behave very similarly with respect to the remaining items. The size of the Chi square value gives some index of the co-variance. No value appears in the cell relating percent of full-time work with percentage of time in achievement. This is because of the overlapping content in these two variables.

Relief at the time of final evaluation is also a part of the set of highly related factors. Relief status was related to the percent of time in full-time work and the percent of time in achievement. There was little

Table 9

	% Full-Time Work	% Time in Achieve- ment	Rehosp.	On Relief	Work. at Follow- Up	Hoppock	Job Leads
% Full-Time Work	X						
% of Achieve- ment	X	X					
Rehosp.	7.52 <sup>(2)</sup>	20.00 <sup>(2)</sup>	X				
On Relief	23.21 <sup>(2)</sup>	28.74 <sup>(2)</sup>	1.29 <sup>(1)</sup>	X			
Working at Follow-Up	36.79 <sup>(2)</sup>	78.34 <sup>(2)</sup>	38.68 <sup>(1)</sup>	22.12 <sup>(1)</sup>	X		
Hoppock	1.78 <sup>(2)</sup>	.14 <sup>(2)</sup>	X	X	X	X	
Job Leads	17.76 <sup>(2)</sup>	18.42 <sup>(2)</sup>	1.03 <sup>(1)</sup>	.15 <sup>(1)</sup>	X	X	X

05                      01  
 $\chi^2$  1df = 3.841                      6.635  
 $\chi^2$  2df = 5.991                      9.210

\* ( ) = Degrees of Freedom

Matrix expressing relationships between seven hard core criteria in terms of Chi square and degrees of freedom.



relationship between being on relief and being rehospitalized.

Rehospitalization during the period is less centrally related to full-time work, although clearly related to being employed at the time of the final evaluation. Apparently some individuals were able to work full time and were, at times, also hospitalized.

The two items surveying the characteristics of vocational pursuits at the time of final evaluation are following job leads, if unemployed, and job satisfaction as measured by the Hoppock. The job satisfaction measure does not relate to any of the hard criteria. It was evident that if a person were working at some time during the study but unemployed at the time of final evaluation, this client was more apt to be looking for other employment than the client who had not held any job during the course of study. Job leads were reliably related to the percent of full-time work and the percent of time in achievement. Looking for work was independent of whether or not the client had been rehospitalized during the project or whether or not he was on relief. In other words, it did not seem to make any difference if he had been rehospitalized or was on relief; he might or might not be out seeking a job.

#### Definition of Inferential Criteria

The inferential criteria differ from the hard criteria in two ways. First, the content of the rating was not as certainly basic to social or vocational adjustment as were the hard criteria. Thus, the items were concerned with the social, personal, and intrapsychic adjustment of the individual. Second, counselor judgment was more a factor, rendering the rating more fallible or unreliable. Three sources of inferential items were available. First, the Wittenborn Psychiatric Rating Scale. From a

distribution for all 55 items, those items were selected that had at least 10 frequencies above one (10 cases with that symptom). This reduced the set to 34 items. Each item was dichotomized at one and greater than one. The nine cluster scores were distributed and dichotomized at the median. In addition, three synthetic measures were adopted. One was an average cluster score elevation which was also distributed and the group dichotomized. The second was dichotomous classification of the group based on the elevation of the highest peak on the profile. The third measure was of the change between an earlier rating of the subject on the instrument and the final rating. The sum of the differences on the nine clusters was derived for each case and distributed for all cases. This distribution was dichotomized. The second data for all these measures appear in the Appendix.

Rating of Social Adjustment (From Mandel). The rating in this instrument ranged from relative objectivity (e.g. source of income) to inferential judgments (e.g. wisdom in management of funds). In addition to financial status, other areas covered were physical health and mental health, religious participation, living arrangements, participation in recreation and sports, the number of close friends, degree of enjoyment from activities, and the over-all adjustment of the client to the parental family and the marital family was obtained. These items for the cases were combined into high and low groups as close to the median as possible. A mean level of each of the subscale scores was obtained for each individual. The group distribution was then trichotomized. A measure of change was obtained by comparing the intake and the final evaluation interview.

The third group of items were the counseling ratings. The items that were examined concerned motivation to seek a job, ability or inability to plan for getting a job, actively seeking a job, and meeting or over-extending his

level of aspiration. These 13 items were grouped into most favorable and least favorable responses. (See Appendix)

Fourth, progress ratings. There were global counselor ratings of social, economic, vocational and emotional adjustment. The ratings went from regression during treatment to marked improvement in one or all of the four areas. A mean for each client was obtained for the scales. All of the scales were tri-chotomized to describe regression, no change, and positive change. These ratings were found to reflect the hard core criteria with no additional information, and so they were omitted at this point to reduce redundancy. (See Appendix)

#### Hard Criteria Compared With Inferential Criteria

The relationships between the hard criteria items have been presented. These data seemed to show a core of three factors: full-time employment, achievement, and working at the time of the final interview. The other hard criteria, especially job satisfaction and following job leads, seem less related either to the above or to each other. This section compares all the inferential criteria to each of the hard criteria.

#### Percentage of Time in Full-Time Employment versus Inferential Criteria.

Table 10 shows the Wittenborn cluster and item results as reflected against full-time employment (trichotomized zero, 1 - 33 percent and greater than 33 percent). More pathology as reflected by elevation on six of the nine clusters is associated with a low percentage of time working. In addition, Wittenborn profiles that had a mean for all cluster scores that was above average for the group of patients was associated with a poorer work record.

There are nine individual ratings that are associated with the poor work record. These appear in Table 10 as well as the other factors.

Table 10

Symptoms Measured by the Wittenborn Psychiatric Rating Scale Which Were Reliably Associated With the Percentage of Weeks Engaged in Full-Time Employment

<u>Source</u>	<u>Item Content</u>	<u>P**</u>
Cluster 2	Conversion Hysteria	.025
3	Manic State	.025
4	Depressed State	.01
5	Schizophrenic Excitement	.001
7	Paranoid Schizophrenic	.01
8	Hebephrenic Schizophrenic	.001
	Higher Mean Cluster Score	.01
	Higher score on peak scale	.001
Scale 9	Use made of physical disease symptoms	.025
13	Avoids people	.025
21	Unable to stick to or carry out any plan	.001
23	Fears others misunderstand him	.05
31	All overt activity at a minimum	.01
39	Failures of affective response	.01
41	Cannot make decisions	.01
42	Opinions exceptional	.05
48	Repudiates earlier insights	.05

\*\*Probability associated with test of independence using  $X^2$  tables.

The work attitude and social adjustment style at the final evaluation that relate to percentage of full-time employment appear in Table 11. The counselor's judgments of the client's attitudes toward working or reasons for desiring work are suggestive. Need to work, ability to plan, and willingness to sacrifice are associated with greater success, while poor information, blocking aid and poor self-knowledge seem to be associated with failure.

#### Initiative and Desire to Work Are Also Noted

The social adjustment ratings (Mandel) suggest that more full-time work is generally associated with physical health, friendships, and enjoyment. In addition, the general level of good qualities on the Mandel and improvement from the intake rating are associated with this hard criteria.

Percentage of Weeks in Achievement versus Inferential Criteria. This hard criterion (trichotomized zero, 1 - 50 percent and greater than 50 percent) was distributed with the same inferential criteria. In Table 12 the results pertaining to the Wittenborn appear. All the clusters, when elevated, tend to be associated with low achievement. In addition, a synthetic measure, the mean of the cluster scores, when high, was associated with a poor achievement record. A higher (more pathological) final evaluation rating is similarly related to this type of failure. In addition, there are 14 individual items involved.

The vocational topics and the social adjustment factors that are associated with poor or good achievement appear in Table 13. Need, willingness, planning, and job seeking are positive aspects while ignorance of the world, of work, of oneself, and lack of desire are the negative factors.

The social adjustment factors are fairly numerous, and suggest that those clients who achieve more vocationally are also making better marital,

Table 11

Counselor Ratings of Vocational and Social Adjustment Reliably  
Associated With the Percentage of Weeks Engaged in Full-Time Employment

<u>Source</u>	<u>Item Content</u>	<u>P**</u>
Item 1*	+Willing to sacrifice to achieve goal	.001
3*	-Poorly informed regarding vocational aptitudes	.01
4*	-Blocks efforts of others	.001
5*	-Lacks knowledge regarding job opportunities	.001
6*	+Ability to plan for a vocational goal	.001
7*	-Lack of acceptance of limitations	.05
10*	+Seeks jobs on own	.001
13*	-Does not want to work	.001
16*	+Must work to support self or family	.001
3A†	+Financial adjustment	.001
4A†	+Physical & mental health adjustment	.001
7C†	+Number of close friends	.01
7E†	+Degree of enjoyment from activities	.025
	+Mean score of Mandel scales	.001
	+Better final than initial rating	.001

\*Vocational Counseling Rating Scale

†Mandel Social Adjustment Rating Scale

\*\*Probability associated with test of independence using  $X^2$  tables

+High or "true" response related to a high percentage of weeks in employment

-Low or "false" response related to a high percentage of weeks in employment.



Table 12

Symptoms Measured by the Wittenborn Psychiatric Rating Scale Which Were Reliably Associated With the Percentage of Weeks Engaged in Achievement

<u>Source</u>		<u>Item Content</u>	<u>P**</u>
Cluster	1	Acute Anxiety	.01
	2	Conversion Hysteria	.01
	3	Manic State	.025
	4	Depressed State	.001
	5	Schizophrenic Excitement	.001
	6	Paranoid Condition	.01
	7	Paranoid Schizophrenic	.001
	8	Hebephrenic Schizophrenic	.01
	9	Phobic Compulsive	.01
		Higher mean cluster score	.001
		Poorer final than initial rating	.025
		Higher score on peak scale	.001
Scale	2	Ideas change with spontaneous rapidity	.05
	7	In almost constant movement	.025
	9	Use made of physical disease symptoms	.01
	13	Avoids people	.001
	19	Cannot resist compulsive acts	.05
	21	Unable to stick to or carry out any plan	.001
	24	Patient's thinking clearly delusional	.01
	25	No organic basis for complaints	.025
	31	All overt activity at a minimum	.001
	34	Compulsive acts	.025
	39	Failure of affective response	.05
	41	Cannot make decisions	.01
	44	Memory faults	.01
	49	Speech is stilted	.01

\*\*Probability associated with test of independence using  $X^2$  tables.

Table 13

Counselor Ratings of Vocational and Social Adjustment Reliably Associated  
With the Percentage of Weeks Engaged in Achievement

<u>Source</u>		<u>Item Content</u>	<u>P**</u>
Item	1*	+Willing to sacrifice to achieve goal	.001
	3*	-Poorly informed regarding vocational aptitudes	.001
	4*	-Blocks efforts of others	.001
	5*	-Lacks knowledge of job opportunities	.001
	6*	+Ability to plan for a vocational goal	.001
	7*	-Lacks acceptance of limitations	.025
	8*	-Motivation to work comes from external pressures	.01
	10*	+Seeks jobs on own	.001
	12*	-Underachievement	.025
	13*	-Does not want to work	.001
	16*	+Must work to support self or family	.001
	3A'	+Financial adjustment	.001
	4A'	+Physical and mental health adjustment	.001
	7B'	+Recreational and sports participation	.01
	7C'	+Number of close friends	.001
	7E'	+Degree of enjoyment from activities	.025
Scale 7'		+Mean score	.001
Marital		+Mean score	.025
Adj. Scale'		+Mean score of Mandel scales	.001
		+Better final than initial Mandel rating	.001

\*Vocational Counseling Rating Scale

'Mandel Social Adjustment Rating Scale

\*\*Probability associated with test of independence using  $X^2$  tables

+High or "true" response related to a high percentage of weeks in an achievement category

-Low or "false" response related to a high percentage of weeks in an achievement category.

financial, recreational, hedonic, and friendship adjustments.

Achieving as Status at Final Evaluation. This is a dichotomous criterion (from the Mandel), which notes whether the client was in some kind of educational or vocational activity at the final evaluation. The Wittenborn results relating to this criterion appear in Table 14. These are five cluster scores. The high mean, high peak score, and more elevated final rating relate to achievement at the time of follow-up. Only three individual items show this relationship.

Table 15 presents the vocational and social ratings that relate to achieving or not achieving at the time of final evaluation. Again, we see knowledge of jobs, knowledge of self, planning, and need relate this outcome. Similarly, better adjustment generally in other areas including health, living arrangements, recreation, friendships, and enjoyment are all involved with achievement at the time of final evaluation.

On Relief at Final Evaluation. This measure of social adjustment was distributed with the same inferential criteria; four cluster scores and six scales are related (See Table 16). In the vocational and social adjustment areas (See Table 17), negativism vocationally versus willingness and need are seen as differentiating vocationally, while all social adjustments, financial, health, religion, and close friends are less desirable. Interestingly, those on relief have better living arrangements in that they are more often living independently (although possibly miserably).

Rehospitalization Between Intake and Final Evaluation. This hard criterion related less solidly within the other hard criteria. Only one Wittenborn relationship is found to schizophrenic excitement. Table 18 reports this and the vocational and social impressions of the raters. Here we see that negativism and not planning are associated with rehospitalization. In the

Table 14

Symptoms Measured by the Wittenborn Psychiatric Rating Scale Which Were Reliably Associated With a Non-Achieving Role at the Time of Final Interview

<u>Source</u>		<u>Item Content</u>	<u>P*</u>
Cluster	1	Acute Anxiety	.05
	2	Conversion Hysteria	.01
	4	Depressed State	.001
	5	Schizophrenic Excitement	.001
	7	Paranoid Schizophrenic	.001
		Higher mean cluster score	.001
		Poorer final than initial rating	.05
		Higher score on peak scale	.001
Scale	9	Use made of physical disease symptoms	.05
	13	Avoids people	.025
	21	Unable to stick to or carry out any plan	.001

\*Probability associated with test of independence using  $\chi^2$  tables.

Table 15

Counselor Ratings of Vocational and Social Adjustment Reliably  
Associated with Achieving at the Time of the Final Interview

<u>Source</u>		<u>Item Content</u>	<u>P**</u>
Item	1*	+Willing to sacrifice to achieve goal	.001
	3*	-Poorly informed regarding vocational aptitudes	.01
	4*	-Blocks efforts of others	.001
	5*	-Lacks knowledge of job opportunities	.025
	6*	+Ability to plan for a vocational goal	.001
	7*	-Lacks acceptance of limitations	.001
	10*	+Seeks jobs on own	.025
	12*	-Underachievement	.025
	13*	-Does not want to work	.001
	16*	+Must work to support self or family	.001
	3A'	+Financial adjustment	.001
	4A'	+Physical and mental health adjustment	.001
	6B'	+Living arrangements	.05
	7B'	+Recreational and sports participation	.001
	7C'	+Number of close friends	.01
	7E'	+Degree of enjoyment from activities	.01
Scale	7'	+Mean score	.01
		+Mean score of Mandel scales	.001
		+Better final than initial Mandel rating	.001

\*Vocational Counseling Rating Scale

'Mandel Social Adjustment Rating Scale

\*\*Probability associated with test of independence using  $X^2$  tables

+High or "true" response related to being classified in an achievement category

-Low or "false" response related to being classified in an inactive category

Table 16

Symptoms Measured by the Wittenborn Psychiatric Rating Scale Which Were  
Reliably Associated With Being On Relief at Time of Final Interview

<u>Source</u>		<u>Item Content</u>	<u>P*</u>
Cluster	4	Depressed State	.01
	5	Schizophrenic Excitement	.001
	7	Paranoid Schizophrenic	.05
	8	Manic State	.001
		Higher score on peak scale	.001
Scale	9	Use made of physical disease symptoms	.025
	13	Avoids people	.05
	21	Unable to stick to or carry out any plan	.001
	23	Fears others misunderstand him	.05
	30	Dramatically attention-demanding	.025
	31	All overt activity at a minimum	.025

\*Probability associated with test of independence using  $X^2$  tables.



Table 17

Counselor Ratings of Vocational and Social Adjustment  
Reliably Associated With Being On Relief at the Time of the Final Interview

<u>Source</u>		<u>Item Content</u>	<u>P**</u>
Item	1*	-Willing to sacrifice to achieve goal	.01
	4*	+Blocks efforts of others to implement vocational goal	.001
	6*	-Able to plan for a vocational goal	.001
	13*	+Does not want to work	.001
	16*	-Must work to support self or family	.025
	3A'	-Financial adjustment	.001
	4A'	-Health adjustment	.01
	5A'	-Religious participation	.01
	6B'	+Living arrangements (independent versus dependent)	.025
	7B'	-Recreational and sports participation	.001
	7C'	-Number of close friends	.025
		-Mean score of Mandel scales	.001
		+Poorer final than initial Mandel rating	.01

\*Vocational Counseling Rating Scale

'Mandel Social Adjustment Rating Scale

\*\*Probability associated with test of independence using  $\chi^2$  tables

+High or "true" response was related to being on relief

-Low or "false" response was related to being on relief

Table 18

Symptoms Measured by the Wittenborn Psychiatric Rating Scale Which Were Reliably Associated With Rehospitalization for Psychiatric Reasons

<u>Source</u>		<u>Item Content</u>	<u>P**</u>
Cluster	5	Schizophrenic Excitement	.025
Item	4*	+Blocks efforts of others	.025
	6*	-Ability to plan for a vocational goal	.01
	3A'	-Financial adjustment	.001
	4A'	-Physical and mental health adjustment	.001
	6B'	-Living arrangements	.001
Marital		-Mean score	.05
Adj. Scale'		-Mean score of Mandel scales	.001
		+Poorer final than initial Mandel rating	.05

\*Vocational Counseling Rating Scale

'Mandel Social Adjustment Rating Scale

\*\*Probability associated with test of independence using  $X^2$  tables

+High or "true" response related to rehospitization

-Low or "false" response related to rehospitization

more general social areas, finance and health problems as well as dependent living arrangements co-vary with rehospitization. In addition, deterioration of the social impression and poorer mean scores on the Mandel are also more common in the group that was rehospitized.

Job Satisfaction. This criterion was obtained from the Hoppock Scale of Job Satisfaction. The number of clients who were employed at the time of their final interview were asked to rate their present job. The group was then dichotomized. The low satisfaction group on the Wittenborn seemed more manic, prone to tantrums, and felt persecuted. No other factors, either vocational or social, are related to job satisfaction.

Following Job Leads. Those clients who were not employed were rated as to whether they were following up job leads regularly. They were dichotomized and compared to the hard criteria. Table 19 reports these results. The Wittenborn clusters relating to this activity are numerous (six.) Similarly the derivatives of the profile, (e.g. the mean, peak, and change ratings) relate. Only one scale (difficulty making decisions) relates.

The activity of following job leads does relate to vocational impressions of the client. Willingness, planning, and need are associated with looking while negativism is associated with not looking. (See Table 20). The mean social adjustment score is related to following leads, as is health.

#### Selection of Final Criteria

The seven hard criteria that were selected and examined in the study of the inferential criteria were retained for the subsequent analysis. In addition, from the inferential criteria two composite ratings were selected. From the Wittenborn the Peak Cluster score was selected and dichotomized into

Table 19

Symptoms Measured by the Wittenborn Psychiatric Rating Scale Which  
Were Associated With Not Following Job Leads Among Clients  
Who Were Unemployed at the Time of the Final Interview

<u>Source</u>		<u>Item Content</u>	<u>P*</u>
Cluster	2	Conversion Hysteria	.05
	3	Manic State	.05
	4	Depressed State	.01
	5	Schizophrenic Excitement	.01
	7	Paranoid Schizophrenic Excitement	.05
	8	Hebephrenic Schizophrenic	.025
		Higher mean cluster scale	.01
		Poorer final than initial rating	.01
		Higher score on peak scale	.025
Scale	41	Cannot make decisions	.025

\*Probability associated with test of independence using  $X^2$  tables.

Table 20

Counselor Ratings of Vocational and Social Adjustment Significantly  
Associated With Following Job Leads During the Week Before Final Interview

<u>Source</u>		<u>Item Content</u>	<u>P**</u>
Item	1*	+Willing to sacrifice to achieve goal	.05
	4*	-Blocks efforts of others	.01
	6*	+Ability to plan for a vocational goal	.025
	10*	+Seeks jobs on own	.001
	13*	-Does not want to work	.01
	16*	+Must work to support self or family	.001
	4A'	+Mental and physical health adjustment	.001
		+Mean score of Mandel scales	.01

\*Vocational Counseling Rating Scale

'Mandel Social Adjustment Rating Scale

\*\*Probability associated with test of independence using  $X^2$  tables

+High or "true" response related to following job leads

-Low or "false" scores related to following job leads

high and low groups. This measure of gross elevation as an index of symptom presence seemed to reflect the broad array of criteria relationships to the different clusters and scales of the Wittenborn. The second inferential criteria that was adopted was the mean of the Mandel Social Adjustment Rating.

#### Variables Relating to the Criteria

Factors relating to vocational success in the succeeding sections will be related to the data obtained at intake either historical or psychometric information, and to the treatment or non-treatment conditions of the experiment.

#### Psychometric Factors Related to the Criteria

Tables 21, 22, and 23 summarize the psychometric factors that were found to relate to the nine criteria. The top margin of each table identifies the criteria, and the vertical margin identifies the psychometric instrument and signs.

Among the hard criteria, the percentage of time in achievement and the vocational status at the time of evaluation relate most clearly to the psychometrics. Among the inferential criteria, both of the elevation measures (Wittenborn and Mandel) are foreshadowed in the psychometrics.

Wechsler Adult Intelligence Scale versus criteria. All the WAIS subscales, and the verbal and performance scales were included in the analysis. In addition, three synthetic measures were developed. These were (a) the difference between verbal and performance IQ, (b) absolute mean deviation within the verbal subtest weighted scores, and (c) absolute mean deviation within the performance subtest weighted scores.

The predominant findings that relate the WAIS to the criteria tie the performance parts of the test to the Wittenborn Peak Cluster. Specifically,

clients who had higher performance IQ's (thus and full-scale IQ) had less pathology on the Wittenborn. In addition, patients with higher scores on comprehension, digit symbol, picture completion, block design, and picture arrangement tended to have lower symptom rating on the Wittenborn when rated six to 18 months later.

The digit symbol subtest relates to subsequent performance in full-time work, achievement, rehospitalization, and working at follow-up. Other findings appear but they are scattered. (See Table 21).

General Aptitude Test Battery versus criteria. The nine GATB subscale scores were included in the analysis along with the number of occupational ability patterns and three synthetic measures. These latter were data reflecting inter-subscale scatter, and highest and lowest scale score dichotomized for analysis.

In Table 22 the GATB results are summarized.

The most solid set of relationships are the associations between working at follow-up and the two criteria: the Wittenborn Peak Cluster and the GATB scales (general intelligence, verbal aptitude, spatial aptitude, clerical perception and motor coordination.) These two criteria also relate to the highest GATB scale elevation and the number of Occupational Ability Patterns (OAP). The mean Mandel Social Adjustment rating parallels these results except for general ability and verbal aptitude.

The criterion percentage of time in achievement is apparently related to the quality of form perception, manual dexterity, low GATB scale and number of OAP's. Combined results suggest that the GATB is very sensitive to psychiatric condition (e.g. deterioration). Especially the speed related tests. Intellectual deterioration at intake testing is followed by a period of poor work adjustment and evident symptoms at follow-up (Wittenborn. See Table 13 as well.)



Table 21

Signs From the Wechsler Adult Intelligence Scale Obtained at Intake  
That Relate to Nine Criteria of Vocational Success and Adjustment at Follow-Up

Wechsler Adult Intelligence Scale	% Full- Time Work	% Time in Achieve- ment	Work. at Follow- Up	Rehosp.	Relief	Hoppock	Job Leads	Peak Witt. Cluster	Mean Mandel Score
Verbal IQ						.05		.01	
Performance IQ								.05	
Full Scale IQ								-	
Verbal minus Perf. IQ								-	
Information subscale					.05			.001	
Comprehension		.05						-	
Arithmetic		.05						-	
Similarities								-	
Digit Span								-	
Vocabulary								.025	.01
Digit Symbol	.025	.001	.001	.025				.025	
Picture Completion								.05	
Block Design								.025	
Picture Arrange- ment			.05	.05				.05	.05
Object Assembly									
Verbal Scatter									
Performance Scatter									

Table 22  
Signs From the General Aptitude Test Battery Obtained at Intake  
That Relate to Vocational Success and Adjustment at Follow-Up

GATB	% Full- Time Work	% Time in Achieve- ment	Work. at Follow- Up	Rehosp.	Relief	Hoppock	Job Leads	Peak Witt. Cluster	Mean Mandel Score
G Intelligence			.025					.01	
V Verbal Aptitude			.01					.025	
N Numerical Aptitude									.05
S Spatial Aptitude								.001	
P Form Perception		.01	.025					.01	.001
Q Clerical Perception			.01					.05	.025
K Motor Coordination			.05						
F Finger Dexterity	.05	.01							.025
M Manual Dexterity			.01		.05				
Highest GATB scale		.025							
Lowest GATB scale	.05					.025			
Average Deviation		.01	.025	.05				.025	.05
No. of OAP's									

Minnesota Multiphasic Personality Inventory versus criteria. Three synthetic scores were included in the analysis, as well as the traditional scale scores and the ego strength score. The only scale or derivative of the MMPI to be sensitive to the criteria was Peterson's (5) points for predicting rehospitalization. To this composite both the Wittenborn Peak Cluster ( $P < .01$ ) and the percentage of time in achievement ( $P < .01$ ) are related. In addition, there was a tendency for clients who have been on relief to have more scale scores over 70. Apparently the kind of psychopathology that relates to vocational failure or success is more accessible in the tests of cognitive functioning.

#### Intake Information Relating to Criteria

The entire intake information questionnaire was objectively coded. These items were dichotomized for analysis. The factors relating to the criteria appear in the following Tables 23, 24, and 25.

The factors descriptive of the client's life pattern which relate to vocational and social criteria appear in Table 23. There appear to be two general topics. In the first, economic need is apparent, and in the second, social connection and integration into the culture appear. Stable economic adjustments seem to remain throughout the period from intake to follow-up. Thus, clients on relief tend to remain on relief, clients dependent on relatives do not follow job leads, the source of income remains the same, and mainly clients who are not on relief nor dependent upon relatives become employed. Similarly, clients who say that they are satisfied with their living arrangements tend not to work later. Some additional findings relating to being on relief are having more than two children, having been married (not being single), and not living with one's parents.

Table 23  
Life Style Factors Relating to Vocational Success and Adjustment

	% Full- Time Work	% Time in Achieve- ment	Work. at Follow- Up	Rehosp.	Relief	Hoppock	Job Leads	Peak Witt. Cluster	Mean Mandel Score
Satisfied with living arrange- ments		.05	.025						
Preference for living		.05							
Number of times married					.025			.05	
Dates								.05	
Frequency of agency visits	.01	.05			.025				.01
Club membership		.01	.001	.05	.01				.01
Belongs to church group		.001	.025	.05					.05
Belongs to social clubs		.05							
Number of personal friends	.01	.001							
Length of friendships					.025				
Frequency of church attend- ance		.025							.025
Number of children					.05				
Services from agencies								.025	
People living with client					.025		.025		.025
Source of income			.025		.001				

The social integration of the client at the time of intake, his club, church, and social group activities are clearly associated with subsequent achievement. Similarly, these kinds of integration into the community are not associated with rehospitalization. There is less psychopathology in the group which comes with social connections such as these when they are subsequently re-examined for symptoms and they are rated later as making a relatively good social adjustment.

One final area is noticeable; clients who make frequent agency visits seem to have less pathology and they are more likely to achieve or to work full time. Yet, clients given more service from a number of agencies have more pathology.

In Table 24 the past achievements of the clients that related to vocational success and adjustment criteria appear. The predominance of the relationships are with the work criteria. The length of time since the client had worked at the time of intake seemed most significant. Clients who had not worked for a long time prior to seeking or being referred for assistance were unlikely to be successful at work or other achievements, and were more likely to be on relief. Those clients who had worked between three to six months prior to coming for service, if they worked, were most likely to be satisfied with their job. It is interesting to note that being a veteran seems to have been a poor prognostic sign, although having another than honorable discharge an even worse sign.

Clients who came for service rating their income as adequate were likely not to work. Attendance at the trade school was seldom followed by middle range of vocational success (either good or zero) and unlikely to occur in the group that is rehospitalized. However, clients who had quit an educational program because of psychiatric symptoms did not achieve well, subsequently.

Table 24  
Past Achievements Relating to Vocational Success and Adjustment

	% Full- Time Work	% Time in Achieve- ment	Work. at Follow- Up	Rehosp.	Relief Hoppock	Job Leads	Peak Witt. Cluster	Mean Mandel Score
Veteran status		.01						.05
Type of service discharge		.05						
Adequacy of income	.01	.01						
Attended trade school		.025		.01				
Length of time since last job	.01	.01	.05		.01			.05
Quit or fired from longest job because of illness				.025				
Quit or fired from last job because of illness				.025				



Similarly, those clients who quit a job or were fired because of illness were more likely to be rehospitalized. There are other scattered findings reported in the Table.

Table 25 records the findings relating family history factors to the criteria. Only four items occur here. The most powerful factor is the presence of two live parents. Clients with intact parental families exhibit less psychopathology and obviously make the best social adjustment. Each of these forms of adjustment is somewhat lessened in likelihood by the death of one parent and most unlikely when both parents are dead. Other factors are the number of marriages by either of the parents. When the mother has been multiply married, the client is more likely to be rehospitalized; if the father has not been remarried, the client is more likely to make a fair (neither poor nor very good) social adjustment. Finally, greater education of the father is associated with a better social adjustment rating on the Mandel.

Table 26 presents the psychiatric factors that relate to criteria of vocational success. These results show that the criteria are most affected by the schizophrenic diagnosis and by chronicity of illness. Patients who were diagnosed schizophrenic had been rehospitalized more often, were less frequently working at follow-up, had achieved less, and evidenced greater behavioral pathology. Patients with more chronic histories of psychiatric hospitalization achieve less. Finally, patients who had been discharged from chronic hospitals showed more pathology in the Wittenborn when finally evaluated.

#### The Effects of Treatment

The data that have been reported come from a composite of the treatment and control group. As they indicate, numerous psychometric and historical

Table 25

## Family History Factors Relating to Criteria of Vocational Success and Adjustment

% Full-Time Work	% Time in Achievement	Work at Follow-Up	Rehosp.	Relief Hoppock	Job Leads	Peak Witt. Cluster	Mean Mandel Score
Parents alive now		.01		.01		.05	.001
Father remarried							.025
Mother remarried			.05				
Father's educational level							.05

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Table 26

## Psychiatric Factors Relating to Criteria of Vocational Success and Adjustment

% Full-Time Work	% Time in Achievement	Work at Follow-Up	Rehosp.	Relief Hoppock	Job Leads	Peak Witt. Cluster	Mean Mandel Score
Serious physical illness							.01
Schizophrenic diagnosis	.01	.05	.025			.05	
Chronic type of psych. hosp. Education						.01	
interrupted by mental illness	.025						
Length of last hospitalization		.01					.01
Length of total hospitalization		.01					

factors relate to the subsequent performance as measured by the criteria.

Apart from the criteria variance associated with these factors, the effects of treatment per se are in question. There is also the question of whether treatment seems to be differentially effective among clients with different histories or different psychometric characteristics or different diagnoses.

The effects of treatment upon the criteria have been found to be almost nonexistent. Seventy inferential criteria from the Wittenborn and from the rating scales, as well as the hard criteria were distributed and Chi square tests performed. The only finding is a tendency for there to be less zero achievers among the treatment group than in the control group ( $\chi^2 = 6.34$  with 2 df =  $p < .05$ ).

In order to check the possibility that treatment might have been more effective within certain sub-populations, the major psychometric and historical variables were each used to dichotomize the entire sample. Thus, within older or younger, or within schizophrenic or non-schizophrenic patients, the effects of treatment were distributed against the criteria. Three rather scattered findings resulted from this analysis. The control sample did better than the experimental treatment sample if the client's spouse had not graduated from high school, ( $p = .01$ ) and if the client had lived in more than one town as a child ( $p = .025$ ). The treatment group did better than the control group if there was more performance scatter on the WAIS ( $p = 0.5$ ). These appear to be meaningless findings. The remarkable absence of differences between the treated and untreated samples is inescapable!

### Prediction of Vocational Success

The factors that relate to vocational success have been discussed in the preceding sections. In the strictest sense, prediction from these factors would be impossible because of a number of problems. None of the statistical tests have resulted from hypotheses that have any theoretical status. The approach has been one of sifting and winnowing the data for leads. Thus, one would expect considerable shrinkage and shifting of results if another sample were studied in this way. Further, the items that were found to relate to vocational success have not been arranged in a predictive system. It is obvious that prediction in this or any other situation must serve some orderly purpose with a statement of acceptable rates of success and error.

Some efforts have been made to survey these data in a way that might suggest predictive factors that are more stable.

#### Procedures

The 17 most promising items from the preceding examination of the data were listed as they are in Table 27. The scoring direction of each item was determined by examining the tables of frequencies. These scoring instructions are also presented in Table 27. Three methods of scoring were then investigated. The first involved counting one point for each "good" finding. The second involved counting one point for each "bad" finding. The third involved counting a positive point for good findings and a negative point for each bad finding. In each scale, totals were obtained for each case. Group distributions were then obtained. The different combinations are listed in Table 27.

As noted, these items would not be expected to give an index of predictive success because of the anticipated shrinkage. In order to

Table 27

Five Item Sets That Relate to Vocational Success and the Selection Ratios  
For Vocational Success and Vocational Failure

Item	Responses		Cross-Validated <sub>1</sub>	Cross-Validated <sub>2</sub>
	Positive	Negative		
Diagnosis	Other than schizophrenic reaction (1)	Schizophrenic reaction (1)	Schizophrenic reaction (-1) Other (1)	
Length of last hospitalization	0-119 days (1)	120 days or more (1)	0-119 days (1) 120 days or more (-1)	0 - 21 days (1)
Length of total hospitalization	0-24 months (1)	25 months or more (1)	6 months or less (1), 25 months or more (-1)	
Comprehension subtest (WAIS)	Scaled score 12-19 (1)	Scaled score 4-11 (1)	Scaled score 12-19 (1), Scaled score 4-9 (-1)	Scaled score 12-19 (1)
Arithmetic subtest (WAIS)	Scaled score 12-17 (1)		Scaled score 12-17 (1)	
Digit symbol subtest (WAIS)	Scaled score 10-19 (1)	Scaled score 4-7 (1)	Scaled score 10-19 (1) Scaled score 4-7 (-1)	Scaled score 10-19 (1)
General Aptitude Test Battery P	Scores 76-147 (1)	Scores 28-75 (1)	Scores 99-147 (1) Scores 28-75 (-1)	
General Aptitude Test Battery M	Scores 59-155 (1)	Scores 1-39 (1)	Scores 59-155 (1) Scores 1-39 (-1)	
Number of Occupational Ability Patterns	6 or more (1)	0-5 (1)	6 or more (1) 1-5 (-1)	

Table 27 (continued)

Item	Responses			Cross-Validated <sub>1</sub>	Cross-Validated <sub>2</sub>
	Positive	Negative	Composite		
Belongs to church group	Yes (1)			Yes (1)	Yes (1)
Adequacy of income	Inadequate (1)	Adequate (1)	Adequate (1) Inadequate (-1)		
Frequency of agency visits	Weekly or bi-weekly (1)	Monthly or less (1)	Weekly or bi-weekly (1), Monthly or less (-1)		
Belonging to clubs	1-4 clubs (1)	None (1)	1-4 clubs (1) None (-1)		
Number of personal friends	1-10 or more (1)	None (1)	1-10 or more (1) None (-1)	1-5 or more (1)	None (-1)
Frequency of church attendance	Weekly or bi-weekly (1)	Monthly or less (1)	Weekly or bi-weekly (1), Monthly or less (-1)		
Veteran status	Non-veteran (1)			Non-veteran (1)	
Type of discharge	Honorable, non-medical (1)	Other (1)	Honorable, non-medical (1) Other (-1)		
Length of time since last job	6 months or less (1)	4 years or more (1)	6 months or less (1), 4 years or more (-1)		
Number of items scoring	18	15	16	6	5
Cutting point	>5	>5	<1	>2	<1
Percentage of error: Predicting high achievement	28	29	23	33	35



Table 27 (continued)

<u>Item</u>	<u>Responses</u>			Cross-Validated <sub>1</sub>	Cross-Validated <sub>2</sub>
	Positive	Negative	Composite		
Middle achievement group predictor:					
Predicted high	62	72	55	34	43
Predicted low	38	28	45	66	57

(1) Add one point  
 (-1) Subtract one point

minimize this, the sample of all cases (169) with complete data was divided randomly into two equal groups. Two criteria were adopted: the trichotomous variable achievement level and the dichotomous variable Wittenborn mean elevation. All psychometric and intake items were then redistributed for the two random groups against these two criteria. Chi square tests of independence were performed for these distributions. The items that related reliably to the criteria within each of the two samples on either criteria were selected. The items that were functional discriminators at this level of examination are also listed in Table 27. These are the cross validated items.

The five scales have been evaluated on the total sample studied here. For each scale the high and zero achievement samples were separated using the point of minimum overlap. These values are reported in Table 27. The number of middle achievement cases is reported as they are classified using the same point of separation.

The 18 items were scored to give one point for the occurrence of the alternative associated with vocational success. If all individuals above the cutting point are called "high" and all below "low", the errors in the high and low groups combined are 28 percent. Sixty-two percent of the middle achievement group is called high and 38 percent of it is called low.

The 15 items having a clearly negative score were so totaled for all cases. Much the same results occur with regard to errors (29 percent) in classifying the high and low samples. The middle sample tends to be more frequently called high (72 percent).

Using a composite of 16 items and scoring each positive and/or negative when appropriate, a somewhat different scale was derived. The combined error level was, of course, less (23 percent) while the middle group was more evenly split (55 percent called high).

Each of the cross validated item scales utilizes the six items that stood up in the cross validation analysis. Note the mounting incorrect classification over the other three scales. Here, 33 or 35 percent of the extreme groups are misclassified. These items may well give an index of the forecasting power of this type of approach.

### Discussion

This program of study and assistance involved a patient sample that was far from typical of psychiatric hospital discharges. The present sample was, in fact, half as frequently married and twice as often from state or municipal hospitals and twice as often diagnosed schizophrenic as the population of psychotic discharges. These three factors are each already recognized as indices of poor prognosis and chronicity of illness.

Vocational success for this group as a whole involved only a few of the patients studied. Less than one-third of the sample worked as much as one-third of the time in full-time jobs and, actually, only one-third of the sample did anything constructive as much as one-half of the time. These were better thirds of the sample, and it can also be said that one-third of the sample literally did no constructive or achieving thing for the entire period averaging over a year. With this goes failure to achieve on the part of many of the patients and the clear tendency to have observable psychiatric symptoms. The presence of symptoms closely paralleled the vocational failure, so that the patients who were able to work tended to be free of psychiatric symptoms.

While it might have been hoped that the symptoms which were part of the psychiatric illness which impeded work would be somewhat reduced with vocational counseling and job planning, this was not so. Nor, was it the case that

counseling was able to alter the rate of vocational success apart from the presence of symptoms as might have been expected. Indeed, one must question the actual presence of any effect, however limited, that counseling may have had upon the patient population.

Although treatment did not alter the vocational adjustment of the patient group, the program of evaluation testing and interviewing told quite a bit about the patients who were and were not successful. Vocational success is most clearly related to measures of cognitive functioning (WAIS and GATB) and little related to measures of personality structure (MMPI). This seems to us to be an extremely important finding. For certainly counseling or treatment as we have practiced it has been aimed at adjustment mediated through personality factors. Although we never suspected that some kind of program of, say, cognitive reconditioning might be appropriate, these findings might suggest that.

Apart from the psychometric findings, certain patterns of social factors emerge which are enlightening. Patients whose social adjustment is in economic equilibrium do not tend to change their style and do not work. Patients with many ties to the community of normal behavior tend to move on to include work among those ties. Finally, patients with well-established patterns of disability or achievement tend to continue these patterns.

There are, then, two suggestions that may be made from these results. The first involves a radical departure from personality oriented treatment to focus on cognitive functioning. The second involves the possibility of directing aid to the patients so as not to establish economic stability in their style of adjustment. These issues will be discussed in the following chapter.

## Chapter IV

### Conclusions

The data presented in the two preceding chapters suggest many specific findings, some of which are suggestive of general trends. Yet, many of the findings reported are hard to integrate into the broad picture of psychiatric disability. Some peculiarities of sampling and other influences may have produced erroneous findings. Only further study can adequately purify the results which we are presenting here. This issue was discussed in the section on prediction. There are, however, a number of trends which recur throughout the data and which deserve reiteration.

There appears to be a clear-cut dimension describing degree of involvement, or disability. The most severely involved patients are characteristically diagnosed schizophrenic. Other factors associated with severity are long hospitalization, hospitalization in a state hospital, youth, minimal vocational skill, and lack of heterosexual adjustment.

Although often not called schizophrenic, patients with personality disorders actually do as badly in subsequent adjustment as the schizophrenic. Although they too tend to be hospitalized less long and often to have been married, their vocational disability is very severe. It is important to realize that most psychiatrically disabled individuals do not have either of these psychiatric patterns. These patients usually have a history of better community adjustment including work, possession of vocational skills, and marriage. These patients tend to make a much better recovery, but the results of this brief survey suggest that they are still frequently disabled and often do not return to the same level of productivity that they had prior to their illness.

A survey of government-supported vocational and case work services suggests that the severely disabled schizophrenic group absorbs approximately two thirds of the treatment efforts directed at all psychiatric patients. The trend seems to be one of an overlapping concern between the legally responsible aftercare agency and the Division of Vocational Rehabilitation. There is little evidence, however, of coordinated planning. Both agencies are involved with the same group of patients for a long period of time. Other agencies may participate, providing various kinds of financial support. Again, coordination of activities between agencies appears to be unstructured. (One might note that there are few structural or administrative assists for such coordination. It is even rare that notification of activity of one agency is sent to another agency that might be collaterally involved.) Intensive case work and vocational services do not seem to go to the patients with character disorders nor are they offered to patients who have the less severe disabling psychiatric illness.

The psychiatric patient who receives services of a vocational nature, therefore, tends to be a person with few skills who is minimally integrated into the community and comes from a state hospital with a schizophrenic diagnosis. There can be no doubt that such patients are grossly disabled. They are, however, not the only patients who are disabled at the end of their hospitalization. It appears that patients from private hospitals do not seek vocational assistance beyond the employment service. They do not seem to need training, since they have made some relatively good adjustment prior to their disability. Such patients seeking vocational assistance frequently appear to need counseling or psychotherapy, and these items, as such, are possibly the hardest to render. The net result, whatever the reasons, is that vocational and case work services are directed to the most severely involved patients rather than a less involved group.



Our own experience with vocational services and their effectiveness suggests some interesting things. The group served in our experimental treatment program paralleled the patients referred to the Division of Vocational Rehabilitation. The group was primarily schizophrenic, unskilled, and chronic. Little or no positive effects were seen in vocational adjustment from the treatment or counseling. Some patients did work or achieve in other ways. However, the treatment program cannot be said to have influenced the likelihood of their working, since the control group did equally as well. The question arises whether the successes seen in other such rehabilitation programs for this group of patients would have occurred without treatment.

Two factors are associated with vocational success. The first is intellectual intactness. The performance sections of the Wechsler Adult Intelligence Scale or the General Aptitude Test Battery reflect this quality. The second is the diagnosis of schizophrenia, which is associated with prolonged vocational disability. At the time of follow-up the patients who were doing the best vocationally were also those with the least psychiatric symptoms.

Personality factors did not distinguish prognostically. Efforts to change personality through counseling or to change work attitudes, interests, etc., were not effective in changing vocational success rates. It is not possible to say whether attitudes and interests were, in fact, changed by counseling but no effective changes were seen in vocational outcome. Since within normal groups of individuals counseling is an effective vocational technique, its lack of effectiveness in this treatment program seems to parallel the gross untreatability of schizophrenia.

Without seeming nihilistic, the authors question the appropriateness of directing as many efforts at the rehabilitation of the very chronic patients when less chronic individuals remain relatively disabled from a psychiatric illness.

Suggestions for further research from these data and experiences are numerous. A few of the more appealing ideas have already been mentioned. The possibility of focusing on cognitive factors in the rehabilitation program rather than upon personality factors has been mentioned. To some degree this approach may be underway within certain programs of treatment, but little evidence has been brought forward to define the cognitive gains of such programs.

Apart from retraining possibly the effectiveness of drug therapy might be measured against tests of cognitive functioning, such as the General Aptitude Test Battery. This test, which is a sensitive instrument and reflects vocational potential, might serve as one guide to future drug therapy programs.

The last suggestion we wish to mention involves a more thorough follow-up of the moderately involved patients to determine the degree of their disability in vocational and community adjustment.

APPENDIX A

(Materials referred to in Chapter II)

Table A<sub>1</sub> A Comparison of Dischargees with Hennepin County Population, by Hospital of Last Discharge and Sex

Hospital	Sex				Total	
	<u>Male</u>		<u>Female</u>		N	%
	N	%	N	%		
State	129	46	152	54	281	100
Minneapolis General	82	44	106	56	188	100
University Hospitals	17	21	65	79	82	100
Fairview	44	20	174	80	218	100
Glenwood Hills	191	27	508	73	699	100
St. Mary's	75	29	187	71	262	100
Total	538	31	1192	69	1730	100
Henn. Co. Population		47		53		100

Table A<sub>2</sub> The Record of Contact by Ten Social Agencies during the 90 Days Immediately Following Discharge for 1730 Patients and the Demographic Characteristics of the Patients Served: Sex

Agency	Sex				Total
	Male		Female		
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>
Division of Vocational Rehabilitation	37	56	29	44	66
Vocational Guidance Service	8	57	6	43	14
State Employment Service	51	51	49	49	100
Research Project	8	53	7	47	15
Aid to the Disabled	3	37	5	63	8
Aid to Dependent Children	1	4	24	96	25
Unemployment Compensation	23	59	16	41	39
Department of Public Relief	42	43	55	57	97
Mental Health Unit	48	42	64	58	112
Children's Service, Unmarried Mothers, etc.	1	4	24	96	25

Table A<sub>3</sub> The Record of Contact by Ten Social Agencies during the 90 Days Immediately Following Discharge for 1730 Patients and the Demographic Characteristics of the Patients Served: Age

Agency	Age													Total
	18-19		20-29		30-39		40-49		50-59		60			
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>		
Div. of Voc'l. Rehab.	4	6	21	32	20	30	7	11	12	18	2	3	66	
Voc'l. Guid. Service	0	-	4	29	3	21	5	36	2	14	0	-	14	
State Employ- ment Service	6	6	24	24	29	29	23	23	16	16	2	2	100	
Research Project	1	7	8	53	1	7	3	20	2	13	0	-	15	
Aid to the Disabled	0	-	2	25	1	13	4	50	0	-	1	13	8	
Aid to Dep. Children	0	-	12	48	5	20	5	20	3	12	0	-	25	
Unemployment Compensation	2	5	4	10	13	33	10	26	9	23	1	3	39	
Dept. of Pub- lic Relief	2	2	23	24	27	28	18	19	25	26	2	2	97	
Mental Health Unit	2	2	22	19	38	34	20	18	25	22	5	4	112	
Child. Svc., Unmarried Mothers, etc.	2	8	10	40	8	32	4	16	1	4	0	-	25	



Table A<sub>4</sub> The Record of Contact by Ten Social Agencies during the 90 Days Immediately Following Discharge for 1730 Patients and the Demographic Characteristics of the Patients Served: Socio-economic Status

Agency	Socio-economic Status													
	I		II		III		V		VI		VII		Unclass.	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Div. of Voc'l. Rehab.	1	1	1	1	12	18	11	17	5	8	17	26	19	29
Voc'l. Guid. Service	0	-	0	-	5	36	3	21	0	-	1	7	5	36
State Employment Service	2	2	6	6	14	14	29	29	11	11	12	12	26	26
Research Project	2	13	2	13	2	13	3	20	0	-	3	20	3	20
Aid to the Disabled	0	-	0	-	0	-	1	13	0	-	3	37	4	50
Aid to Dep. Children	0	-	1	4	2	8	5	20	1	4	1	4	15	60
Unemployment Compensation	1	3	3	8	4	10	12	31	7	18	5	13	7	18
Dept. of Public Relief	0	-	4	4	13	13	19	20	9	9	15	15	37	37
Mental Health Unit	4	4	10	9	12	11	28	25	10	9	19	17	29	26
Child. Svc., Unmarried Mothers, etc.	0	-	1	4	1	4	4	16	3	12	0	-	16	64

Table A<sub>5</sub> The Record of Contact by Ten Social Agencies during the 90 Days Immediately Following Discharge for 1730 Patients and the Demographic Characteristics of the Patients Served: Marital Status

Agency	Marital Status										Total
	Single		Married		Divorced		Separated		Widowed		
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	
Div. of Voc. Rehab.	33	50	16	24	10	15	4	6	3	5	66
Voc'l. Guid. Service	7	50	2	14	3	21	1	7	1	7	14
State Employ- ment Service	33	33	41	41	19	19	5	5	2	2	100
Research Project	9	60	1	7	3	20	0	-	2	13	15
Aid to the Disabled	6	75	1	13	1	13	0	-	0	-	8
Aid to Dep. Children	3	12	3	12	16	48	3	12	0	-	25
Unemployment Compensation	9	23	22	56	7	18	0	-	1	3	39
Dept. of Pub- lic Relief	33	34	33	34	17	18	4	4	10	10	97
Mental Health Unit	39	35	44	39	16	14	9	8	4	4	112
Child. Svc., Unmarried Mothers, etc.	3	12	15	60	5	20	0	-	2	8	25

Table A<sub>6</sub> The Record of Contact by Ten Social Agencies During the 90 Days Immediately Following Discharge for 1730 Patients and the Demographic Characteristics of the Patients Served: Diagnosis

Agency	Diagnosis							
	Involuntional		<u>Psychosis</u>		Schizophrenic		Psycho-physiological	
			Affective					
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Division of Voc'l. Rehabilitation	0	-	5	8	44	67	0	-
Vocational Guidance Service	0	-	0	-	7	50	0	-
Employment Service	1	1	4	4	34	34	1	1
Research Project	0	-	0	-	7	47	0	-
Mental Health Unit	0	-	8	7	78	69	0	-
Dept. of Public Relief	3	3	4	4	46	47	0	-
Aid to the Disabled	0	-	0	-	5	63	0	-
Aid to Dependent Children	0	-	0	-	6	24	1	4
Unemployment Comp.	1	3	2	5	11	28	1	3
Child Welfare Service	1	4	2	8	13	52	0	-

Table A<sub>6</sub> (continued) The Record of Contact by Ten Social Agencies During the 90 Days Immediately Following Discharge for 1730 Patients and the Demographic Characteristics of the Patients Served: Diagnosis

Agency	Diagnosis										
	<u>Neurosis</u>				Person- ality Disorder		Situa- tional		Other		Total
	Anxiety		Depressive								
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>
Division of Voc'l. Rehabilitation	0	-	8	12	7	11	2	3	0	-	66
Vocational Guidance Service	0	-	4	29	3	21	0	-	0	-	14
Employment Service	6	6	24	24	23	23	3	3	3	3	99
Research Project	0	-	4	33	3	20	0	-	1	7	15
Mental Health Unit	2	2	13	12	9	8	0	-	2	2	112
Dept. of Public Relief	2	2	14	14	25	26	0	-	3	3	97
Aid to the Disabled	0	-	0	-	2	25	0	-	1	13	8
Aid to Dependent Children	5	20	8	32	4	16	1	4	0	-	25
Unemployment Comp.	1	3	13	33	9	23	1	3	0	-	39
Child Welfare Service	0	-	4	16	2	8	2	8	1	4	25

Table A<sub>7</sub> The Record of Contact by Ten Social Agencies During the 90 Days Immediately Following Discharge for 1730 Patients and the Demographic Characteristics of the Patients Served: Hospital

Agency	Hospital												
	State		Mpls. General		Univer-sity		Fair-view		Glenwood Hills		St. Mary		Total
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>
Division of Voc'l. Rehabilitation	45	68	10	15	1	2	1	2	7	11	2	3	66
Vocational Guidance Service	3	21	9	64	0	-	1	7	1	7	0	-	14
Employment Service	25	25	29	29	6	6	5	5	24	24	11	11	100
Research Project	4	27	7	47	3	20	0	-	1	7	0	-	15
Mental Health Unit	88	79	9	8	0	-	1	1	11	10	3	3	112
Dept. of Public Relief	35	36	49	51	3	3	2	2	6	6	2	2	97
Aid to the Disabled	4	50	3	37	1	13	0	-	0	-	0	-	8
Aid to Dependent Children	3	12	6	24	2	8	1	4	10	40	3	12	25
Unemployment Comp.	7	18	11	28	2	5	3	8	11	28	5	13	39
Child Welfare Service	8	32	6	24	3	12	0	-	5	20	3	12	25

APPENDIX B

(Materials referred to in Chapter III)



# Wittenborn Psychiatric Rating Scale

Experimental      Control      UMH

1. Acute Item  
insomnia

51      42      24  
13      10      4  
6      4      1  
0      1      2  
0      1      0

0  
1  
2  
3  
X

2. Ideas change with spontaneous  
rapidity

53      39      27  
9      15      1  
5      2      3  
3      1      0  
0      1      0

0  
1  
2  
3  
X

3. Unjustified sexual beliefs

64      54      28  
6      3      3  
0      0      0  
0      1      0

0  
1  
2  
X

4. Cannot banish obsessive thoughts

45      30      24  
9      15      3  
11      9      3  
3      3      1  
2      1      0

0  
1  
2  
3  
X

5. Delusional belief that he is evil

48      43      21  
15      12      8  
7      2      1  
0      1      1

0  
1  
2  
3

6. Gives in easily to others

19      20      9  
28      22      14  
16      8      6  
7      8      2

0  
1  
2  
3

7. In almost constant movement

41      32      22  
20      18      7  
6      5      1  
3      3      1

0  
1  
2  
3

8. Unaware of the feelings of others

45      40      27  
23      15      4  
2      3      0

0  
1  
2

Experimental   Control   UMH

Item

9. Use made of physical disease symptoms

47	44	29
10	7	0
13	7	1
0	0	1

0  
1  
2  
X

10. Refuses to eat

65	54	26
3	3	4
1	0	0
0	0	0
1	1	1

0  
1  
2  
3  
X

11. Deliberately disrupts routines

59	49	30
8	7	1
3	2	0
0	0	0

0  
1  
2  
3

12. Temper tantrums

25	17	11
25	22	10
17	19	10
2	0	0
1	0	0

0  
1  
2  
3  
X

13. Avoids people

30	18	16
28	29	11
12	11	4

0  
1  
2

14. Shouts, sings and talks loudly

53	42	27
13	13	2
4	3	2
0	0	0

0  
1  
2  
3

15. Behavior disrupted by phobias

53	53	26
14	4	1
3	0	3
0	1	0
0	0	1

0  
1  
2  
3  
X

16. Incontinent because of own negligence

54	43	27
15	15	3
1	0	1
0	0	0

0  
1  
2  
3

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
53	44	27	17. Engrossed in plans
14	11	4	0
3	2	0	1
0	1	0	2
			X
39	39	22	18. Feelings of impending doom
26	16	6	0
4	2	2	1
1	1	1	2
			3
56	50	28	19. Cannot resist compulsive acts
8	6	2	0
5	0	1	1
1	2	0	2
			3
57	50	25	20. Exaggeration of ability and well-being
10	7	5	0
3	1	1	1
			2
17	16	13	21. Unable to stick to or carry out any plan
34	31	14	0
18	10	4	1
1	1	0	2
			X
30	29	19	22. Cannot believe that he will be helped
32	21	8	0
7	5	0	1
1	2	3	2
0	1	1	3
			X
46	39	21	23. Fears others misunderstand him
18	13	6	0
2	3	1	1
4	3	3	2
			3
45	35	24	24. Patient's thinking clearly delusional
15	14	4	0
7	7	2	1
3	2	1	2
			3

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
49	43	26	25. No organic basis for complaints
7	4	3	0
11	8	2	1
3	3	0	2
			3
40	37	22	26. Feels systematically persecuted
19	9	6	0
10	7	1	1
1	5	2	2
			3
59	52	30	27. Believes others influence him
7	2	1	0
1	1	0	1
3	3	0	2
			3
14	14	4	28. Desperately distressed by his anxiety
28	24	15	0
25	18	10	1
3	2	2	2
			3
47	42	27	29. Organic pathology with emotional basis
10	7	1	0
7	6	2	1
6	3	1	2
			3
45	32	19	30. Dramatically attention-demanding
11	11	8	0
13	14	3	1
1	1	1	2
			3
42	34	19	31. All overt activity at a minimum
23	14	8	0
5	8	4	1
0	2	0	2
			3
67	54	29	32. Grandiose notions
3	3	2	0
0	1	0	1
0	0	0	2
			3

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
42	35	23	33. Does not believe he has a problem
5	7	4	0
14	9	1	1
6	6	2	2
3	1	1	3
			X
56	46	29	34. Compulsive acts
9	6	2	0
4	2	0	1
1	2	0	2
0	2	0	3
			X
60	47	27	35. Great variation occurs in rate of speech
6	9	1	0
4	2	3	1
			2
53	44	28	36. Initiates physical assaults
15	12	3	0
2	2	0	1
0	0	0	2
			3
49	48	21	37. Mood changes very frequent and abrupt
19	5	7	0
1	1	2	1
1	4	1	2
			3
64	50	27	38. Has made attempts at suicide
4	6	1	0
1	1	1	1
1	1	2	2
			3
42	39	24	39. Failures of affective response
22	12	5	0
6	6	2	1
0	1	0	2
			X
57	53	26	40. No concern over physical handicaps
11	3	5	0
1	1	0	1
1	1	0	2
			3

Experimental    Control    UMH

Item

41. Cannot make decisions

15	18	12
35	29	12
18	10	6
2	1	1

0  
1  
2  
3

42. Opinions exceptional

50	38	26
12	15	5
8	4	0
0	1	0

0  
1  
2  
3

43. Hallucinations

65	55	31
2	1	0
1	0	0
2	2	0

0  
1  
2  
3

44. Memory faults

46	35	23
9	9	6
9	10	1
1	1	0
5	3	1

0  
1  
2  
3  
X

45. Fear of committing an abhorred act

65	54	29
3	2	1
1	1	1
1	1	0

0  
1  
2  
3

46. Words not relevant to recognizable idea

61	47	31
6	6	0
1	4	0
2	1	0

0  
1  
2  
3

47. Shows failure and blocking

18	19	8
38	29	15
9	8	6
5	2	2

0  
1  
2  
3

48. Repudiates earlier insights

42	48	23
16	3	5
3	1	2
4	1	0
5	5	1

0  
1  
2  
3  
X



Experimental    Control    UMH

Item

44	32	21
23	21	9
1	5	1
2	0	0

49. Speech is stilted

0  
1  
2  
3

58	50	30
9	3	1
2	0	0
0	0	0
1	5	0

50. Lies or steals

0  
1  
2  
3  
X

57	42	30
12	12	1
1	1	0
0	3	0

51. Exaggerated affective expressions

0  
1  
2  
3

44	40	25
14	9	1
8	6	4
4	3	1

52. Characteristically oppositional

0  
1  
2  
3

Mandel Scale of Social Adjustment

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score</u>
---------------------	----------------	------------	--------------

Scale I. Occupational Adjustment

A. Employment - Hours

14	16	13	5
----	----	----	---

Works full time or equivalent to yield adequate income.

0	0	0	4
---	---	---	---

Works at two or more jobs totalling more than full time necessary to yield adequate income.

1	1	0	4
---	---	---	---

Works 3/4 time.

3	4	0	3
---	---	---	---

Works 1/2 time.

0	0	0	2
---	---	---	---

Works 1/4 time.

2	2	1	2
---	---	---	---

Sheltered work program of 1/2 to full time.

46	34	13	1
----	----	----	---

Unemployed.

3	2	5	X
---	---	---	---

Not applicable or no response.

Regularity

13	22	13	5
----	----	----	---

Steady except for vacations and legitimate illness.

2	0	0	4
---	---	---	---

Steady with 4-8 weeks lost time annually.

0	1	0	3
---	---	---	---

Steady with 9-12 weeks lost time annually.

3	0	0	2
---	---	---	---

Extended periods of lost time; 4-9 months annually.

4	2	1	1
---	---	---	---

Highly irregular with many periods of lost time annually.

47	33	18	X
----	----	----	---

Not applicable or no response.

Stability

11	16	12	5
----	----	----	---

No change or one change for better job annually.

1	4	1	4
---	---	---	---

Change of 2 equal jobs annually.

7	2	0	3
---	---	---	---

Change of 3-4 unequal jobs annually.

2	0	0	2
---	---	---	---

Change of 5 or more unequal jobs annually.

1	2	1	1
---	---	---	---

Only odd jobs.

47	34	18	X
----	----	----	---

Not applicable or no response.

Inter-Personal Relationships

5	5	7	5
---	---	---	---

Very satisfactory with employer and co-workers.

12	17	6	4
----	----	---	---

Satisfactory with employer and co-workers.

1	2	0	3
---	---	---	---

Satisfactory with employer but not with co-workers.

2	0	1	2
---	---	---	---

Satisfactory with co-workers but not with employer.

1	1	1	1
---	---	---	---

Unsatisfactory with employer and co-workers.

48	33	17	X
----	----	----	---

Not applicable or no response.

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score</u>
4	5	1	5
13	13	10	4
1	1	0	3
2	2	1	2
2	4	2	1
47	33	18	X

Attitude Toward Employment

Likes all aspects of job.  
Generally satisfied with job.  
Neutral or ambivalent.  
Satisfied with only certain aspects of job.  
Extremely dissatisfied and unhappy with job.  
Not applicable or no response.

B. Education (if regularly enrolled)

Achievement and Attendance

1	2	6	5
0	1	0	4
0	0	0	3
0	0	0	2
0	0	0	1
68	56	26	X

Average or better grades and regular attendance.  
Average or better grades and frequent absences.  
Below average grades and regular attendance.  
Below average grades and frequent absences.  
Failing work.  
Not applicable or no response.

Inter-Personal Relationships

0	1	3	5
0	2	3	4
0	0	0	3
0	0	0	2
0	0	0	1
69	56	26	X

Very satisfactory with instructors and classmates.  
Satisfactory with instructors and classmates.  
Satisfactory with instructors but not with classmates.  
Satisfactory with classmates but not with instructors.  
Unsatisfactory with instructors and classmates.  
Not applicable or no response.

Attitude Toward Education

1	2	4	5
0	1	1	4
0	0	1	3
0	0	0	2
0	0	0	1
68	56	26	X

Likes all aspects of work.  
Generally satisfied with work.  
Neutral or ambivalent.  
Satisfied with only certain aspects of the work.  
Extremely dissatisfied and unhappy with work.  
Not applicable or no response.

Experimental   Control   UMH   Score

2	0	1	5
1	2	1	4
0	0	0	3
0	0	0	2
0	0	0	1
66	57	30	X

1	0	1	5
0	1	0	4
3	0	1	3
0	1	0	2
0	0	0	1
65	57	30	X

C. Housewife (if main occupation)

Performance

All duties performed fully and efficiently with little assistance from family.

Duties performed adequately with necessary assistance from family.

Duties performed only with employed assistance.

Duties performed with difficulty despite assistance from family and employed help.

Unable to assume responsibility for duties.

Not applicable or no response.

Attitude Toward Household Duties

Enjoys and likes all aspects of work.

Generally satisfied with work without encountering problems.

Tolerant of work.

Dissatisfied with duties and dislikes work.

Resents and refuses to perform duties.

Not applicable or no response.

D. Retired Person (If not employed, but retired from active work because of age or disability precluding job participation. May or may not be pensioned.)

Activity

0	0	0	5
---	---	---	---

Does odd jobs; may get money for work and keeps occupied with hobbies, reading current events, craftwork, and continues interest and participation in organizations.

0	1	0	4
---	---	---	---

Works around home and manages to keep busy most of the time.

0	1	0	3
---	---	---	---

Has difficulty keeping occupied and minimally applies self to work around home.

1	0	0	2
---	---	---	---

Idle most of the time and finds it a major problem to keep self occupied.

0	0	0	1
---	---	---	---

Completely idle; rarely gets out of home or manifests interest in any activity.

68	57	32	X
----	----	----	---

Not applicable or no response.

Experimental   Control   UMH   Score

1	2	0	5
0	0	0	4
0	0	0	3
0	0	0	2
0	0	0	1
68	57	23	X

Self Care (Performance that can be expected commensurate with physical or mental condition.)

Performs necessary self care with no assistance from others.

Performs necessary self care with some assistance or urging from others.

Performs necessary self care only with much assistance from others.

Must be cared for totally by others and presents no problem in accepting care.

Refuses care from others and inadequately cares for self.

Not applicable or no response.

Scale III. Economic Adjustment

A. Financial Status

17	6	3	5
16	19	11	4
4	3	3	3
5	9	2	2
27	20	13	1
0	2	0	X

Income more than adequate for needs.

Income adequate with minor financial problems.

Income adequate--supplemented from other sources.

Major financial problems.

Completely dependent upon others.

Not applicable or no response.

B. Management of Funds

18	7	4	5
21	21	10	4
7	7	5	3
15	14	8	2
7	3	3	1
1	7	1	X

No problems in making income meet needs.

Minor problems in making income meet needs.

Major problems in making income meet needs.

Must borrow or receive financial aid from other sources to make income meet needs.

Unable to plan for or manage financial situation--very severe problems.

Not applicable or no response.

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score</u>
---------------------	----------------	------------	--------------

8	3	7	5
15	17	10	4

3	3	2	3
---	---	---	---

34	31	11	2
----	----	----	---

9	5	1	1
---	---	---	---

0	0	1	X
---	---	---	---

16	12	8	5
22	21	15	4

15	9	5	3
----	---	---	---

7	14	1	2
---	----	---	---

9	3	2	1
---	---	---	---

0	0	1	X
---	---	---	---

#### Scale IV. Health Adjustment

##### A. Status of Physical and Mental Health

Problems absent.

Minor health problems present but do not affect effective functioning materially.

Physical condition affects effective functioning materially.

Mental condition affects effective functioning materially.

Physical and mental condition materially precludes effective performance.

Not applicable or no response.

##### B. Attitude Toward Health

No concern about health.

Occasional realistic concern about health.

Frequent realistic concern about health.

Great or excessive realistic concern about health.

Great or excessive unrealistic concern about health.

Not applicable or no response.

#### Scale V. Religious Adjustment

##### A. Participation

At least weekly--belongs to congregation.

At least bi-weekly.

About monthly.

Only on infrequent occasions or holy observances.

None.

Not applicable or no response.

17	16	12	5
----	----	----	---

4	7	1	4
---	---	---	---

3	3	2	3
---	---	---	---

22	13	6	2
----	----	---	---

21	15	10	1
----	----	----	---

2	5	1	X
---	---	---	---

##### B. Attitude Toward Religion

Stable and interested.

Accepting with mild interest.

Tolerant and accepting.

Excessive emotional concern and involvement.

Rejection and aversion.

Not applicable or no response.

12	12	9	5
----	----	---	---

15	8	5	4
----	---	---	---

19	16	10	3
----	----	----	---

6	6	4	2
---	---	---	---

14	10	4	1
----	----	---	---

3	7	0	X
---	---	---	---



Experimental   Control   UMH   Score

48	46	23	5
12	8	5	4
4	4	1	3
3	1	1	2
2	0	1	1
0	0	1	X

27	21	14	5
16	11	7	4
19	17	5	3
4	3	0	2
3	7	5	1
0	0	1	X

0	1	0	5
0	0	0	4
2	1	2	3
11	13	6	2
54	40	24	1
2	4	0	X

8	12	3	5
8	4	8	4
10	8	5	3
15	15	8	2
25	18	7	1
3	2	1	X

5	4	2	5
18	7	3	4
20	23	17	3
9	6	1	2
15	19	7	1
2	0	2	X

Scale VI. Residence Adjustment

A. Stability

Not more than one move or no moves in past year.  
 Moved two times in past year.  
 Moved three times in past year.  
 Moved over three times in past year.  
 No permanent address--floater.  
 Not applicable or no response.

B. Living Arrangements

Own home or apartment.  
 Independent rooming with others than family.  
 With parents or siblings.  
 Supervised living arrangement.  
 Institutionalized.  
 Not applicable or no response.

Scale VII. Community and Social Adjustment

A. Total Organized Participation\*

Score 15 over.  
 Score 11-15.  
 Score 6-10.  
 Score 1-5.  
 Score 0.  
 Not applicable or no response.

B. Recreational and Sports Participation

Participant and observer in group activities frequently.  
 Participant and observer in group activities occasionally.  
 Participant or observer only infrequently.  
 Only home recreation, i.e., radio, television, reading.  
 Rarely participates or observes.  
 Not applicable or no response.

C. Number of Close Friends

Over ten.  
 Five to ten.  
 Two to four.  
 One.  
 None.  
 Not applicable or no response.

\*Score for Each Structured Organization

5 - Officer.	2 - Attendance.
4 - Committee member.	1 - Membership.
3 - Pays dues.	



Experimental    Control    UMH    Score

14	10	6	5
11	9	7	4
27	18	9	3
10	13	4	2
6	9	5	1
1	0	1	X

D. Degree Socialization with Friends and Relatives

More than once a week.  
At least weekly.  
Occasionally.  
Rarely.  
Never.  
Not applicable or no response.

8	7	8	5
36	23	13	4
17	15	4	3
1	2	0	2
5	11	5	1
2	1	2	X

E. Degree of Enjoyment From Activities

Extremely pleasurable and enjoyable.  
Likes quite well.  
Neutral or ambivalent.  
Dislikes.  
Disturbing and upsetting.  
Not applicable or no response.

9	1	3	5
2	1	2	4
8	10	2	3
5	3	3	2
33	31	12	1
12	13	10	X

F. Heterosexual Adjustment (if single)

Frequency of Dating

More than once a week.  
Weekly average.  
Occasionally.  
Rarely.  
Never.  
Not applicable or no response.

5	1	3	5
11	10	2	4
15	5	5	3
4	4	1	2
17	17	7	1
17	22	14	X

Degree of Enjoyment

Extremely pleasurable and enjoyable.  
Likes quite well.  
Neutral or ambivalent.  
Dislikes.  
Disturbing or upsetting.  
Not applicable or no response.

Scale VIII. Family Adjustment

A. Present Adjustment to Parents

Nature of Relationship with Parents

1	2	0	1
4	5	4	2
0	2	2	3
9	10	3	4
5	6	3	5
50	34	20	X

Broken.  
Discordant.  
Neutral.  
Fairly harmonious.  
Harmonious.  
Not near parents or not applicable.

Attitude Toward Relationship with Parents

2	2	1	1
4	4	3	2
2	5	3	3
8	12	3	4
3	1	3	5
50	35	19	X

Very disturbed.  
Disturbed.  
Neutral.  
Pleased.  
Very pleased.  
Not near or not applicable.

Experimental   Control   UMH   Score

1	3	1	1
5	5	2	2
2	1	1	3
5	6	1	4
2	2	0	5
54	42	27	X

Degree of Responsibility in Family Role (if living at home)

Completely inadequate.  
Inadequate.  
Slightly inadequate.  
Adequate.  
Adequate deficient.  
Not at home or close to parents.

0	1	0	1
2	4	2	2
0	6	2	3
8	3	1	4
5	4	0	5
54	41	27	X

Attitude Toward Taking Responsibility at Home

Very disturbed.  
Disturbed.  
Neutral.  
Fairly satisfied.  
Satisfied.  
Not near or not applicable.

B. Marital Adjustment

Nature of Relationship with Wife and/or Children

5	4	3	1
2	1	5	2
1	0	0	3
2	2	1	4
4	7	0	5
55	45	23	X

Broken.  
Discordant.  
Neutral.  
Fairly harmonious.  
Harmonious.  
Not applicable.

Contention and Disagreement Occur in Marital Adjustment

1	4	0	1
5	4	1	2
1	0	4	3
2	1	0	4
1	1	2	5
59	49	25	X

Rarely.  
Occasionally.  
Frequently.  
Very frequently.  
Constantly.  
Not applicable.

Attitude Toward Marital Relationship

1	3	0	1
3	1	2	2
0	1	3	3
5	6	1	4
3	2	1	5
57	46	25	X

Negative.  
Largely negative.  
Ambivalent.  
Largely positive.  
Satisfied.  
Not applicable.

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score</u>	<u>Degree of Personal Responsibility in Family Role</u>
4	0	2	1	Completely inadequate <sub>1</sub>
4	4	3	2	Inadequate <sub>2</sub>
0	2	3	3	Slightly inadequate <sub>3</sub>
4	5	0	4	Adequate <sub>4</sub>
1	2	1	5	Adequate and efficient <sub>5</sub>
56	46	23	X	Not applicable.
				<u>Attitude Toward Personal Responsibility in Family Role</u>
1	2	1	1	Very disturbed <sub>6</sub>
6	4	4	2	Disturbed <sub>7</sub>
1	2	0	3	Neutral <sub>8</sub>
3	3	3	4	Fairly satisfied <sub>9</sub>
2	4	1	5	Satisfied <sub>10</sub>
56	44	23	X	Not applicable.

- <sub>1</sub>Contributes major and severe problems causing disruption of family stability and/or income.  
<sub>2</sub>Contributes some problems requiring agency intervention or assistance--marked difficulty.  
<sub>3</sub>Contributes problems not requiring outside assistance other than from the family.  
<sub>4</sub>Minor problems with ability to handle.  
<sub>5</sub>Ability to handle any problems which might arise without disruption of family stability.

- <sub>6</sub>"I've failed."  
<sub>7</sub>"I could have done much better."  
<sub>8</sub>"Not an issue."  
<sub>9</sub>"Doing pretty well, considering."  
<sub>10</sub>"I'm doing a good job."

Information to be Obtained from Public Relief Agencies

				<u>Is client on relief now?</u>
25	18	7	1	Yes.
33	23	22	2	No, never has been.
11	17	3	3	No, but was previously.
0	1	0	R	No answer or don't know.
				<u>If yes, how long has he been receiving assistance?</u>
0	2	1	1	One to four weeks.
2	1	0	2	One to three months.
2	2	0	3	Four to six months.
20	14	6	4	More than six months.
43	37	0	X	Not applicable.
2	3	25	R	Don't know, no answer.

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score</u>
20	12	6	1
5	9	1	2
44	37	25	X
0	1	0	R
1	2	0	1
13	14	1	2
3	1	0	3
6	4	4	4
0	0	0	5
5	4	2	6
43	36	25	X
0	0	0	R

If yes, to what extent?

Full support.

Partial support.

Not applicable.

Don't know, no answer.

If yes, what type(s) of aid?

Aid to Disabled, Blind.

Division of Public Relief,  
Minneapolis.

Social Security.

Aid to Dependent Children.

Old Age Assistance.

Other.

Not applicable.

Don't know, no answer.

# Vocational Counselor Rating Scale

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score*</u>	<u>Item</u>
11	6	8	1	1. The patient would be willing to take or do things that are not pleasant in order to achieve a goal.
20	23	15	2	
5	4	1	3	
21	10	4	4	
12	16	3	5	
14	12	16	1	2. Is presently objectively successful in his occupation (or, if in school or training, in his studies).
6	13	4	2	
1	1	0	3	
3	1	1	4	
45	41	10	5	
15	17	2	1	3. Seems poorly informed in regard to his vocational aptitudes and skills in various job areas.
24	15	7	2	
4	0	4	3	
9	12	10	4	
16	15	8	5	
13	5	4	1	4. The patient chronically blocks efforts made by other to implement a vocational program.
26	14	6	2	
0	0	0	3	
12	17	5	4	
18	20	16	5	
0	3	0	X	
9	11	1	1	5. The patient has little knowledge of just what kind of job opportunities there are.
25	22	9	2	
1	1	2	3	
15	13	9	4	
19	12	10	5	
7	5	5	1	6. The patient can effectively plan for a vocational goal.
13	16	8	2	
1	4	2	3	
21	10	7	4	
27	24	9	5	
20	16	5	1	7. The patient has not realistically "accepted" the limitations imposed on him by his mental status.
23	17	8	2	
3	1	2	3	
12	17	8	4	
11	7	8	5	
0	1	0	X	

\*Legend:

1 - true  
2 - somewhat true  
3 - both true and false

4 - somewhat false  
5 - false  
X - no response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score</u>	<u>Item</u>
18	12	7	1	8. The patient's motivation to work comes from external pressures.
22	25	9	2	
5	3	2	3	
10	9	6	4	
10	7	5	5	
4	3	2	X	
13	13	5	1	9. Some things the patient has said or done suggest that he is afraid of job interviewing.
20	13	5	2	
1	4	0	3	
7	3	3	4	
28	26	16	5	
27	18	11	1	10. The patient reads want ads, or mentions other things that suggest he has done some job seeking on his own.
8	7	2	2	
3	2	0	3	
4	3	3	4	
25	25	12	5	
2	4	3	X	
13	12	2	1	11. The patient's level of aspiration seems to be low--even for his abilities.
8	6	2	2	
0	0	1	3	
21	15	4	4	
27	26	22	5	
19	10	7	1	12. Tends to be an under-achiever in his work (or, if in school or training, in his studies).
18	16	4	2	
2	3	1	3	
12	16	4	4	
14	11	15	5	
4	3	0	X	
13	11	1	1	13. For all intents and purposes, the patient apparently just does not want to work.
11	6	2	2	
2	2	2	3	
12	8	1	4	
30	31	25	5	
1	1	0	X	
9	7	2	1	14. The patient claims that his physical status now prohibits work.
4	3	0	2	
3	2	0	3	
3	3	0	4	
50	44	29	5	
16	15	10	1	15. The patient's past achievements seemed to be in line with his skills and his intellectual level.
35	21	10	2	
0	2	1	3	
5	9	5	4	
13	9	5	5	
0	3	0	X	

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Score</u>	<u>Item</u>
25	13	16	1	16. The patient seems to feel that he must work to support his family (or himself, if alone).
16	22	8	2	
2	2	0	3	
9	8	1	4	
17	14	6	5	
3	3	1	1	17. The patient has no interests or has no well-developed interest areas.
21	16	4	2	
1	5	0	3	
22	16	9	4	
20	17	17	5	
2	2	0	X	
23	19	16	1	18. The patient shows an active interest in work possibilities.
15	9	6	2	
2	0	2	3	
8	9	3	4	
19	21	3	5	
2	1	1	X	
9	7	3	1	19. The patient wants to work at a vocation that is above his skills and capacities.
15	11	3	2	
0	1	2	3	
11	9	2	4	
34	31	21	5	
23	6	6	1	20. The patient has not followed through on suggestions outlined in the counseling setting.
11	5	1	2	
1	2	2	3	
10	6	2	4	
24	27	19	5	
0	13	1	X	



# Intake Interview

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			7. Referred from:
0	0	35	(1) University of Minnesota Hospitals
19	19	0	(2) Minneapolis General Hospital
17	11	0	(3) Division of Public Relief, Vocational Guidance Service
3	1	0	(4) Minneapolis V.A. Mental Health Clinic
8	5	0	(5) St. Cloud Veterans Administration Hospital
12	16	0	(6) Hennepin County Welfare Board
3	1	0	(7) Family and Children's Service
5	3	0	(8) Self or Private
7	3	0	(9) Other
0	1	0	(X) N/A; D/K; no response
			8. Sex of patient
43	33	17	(1) Male
31	27	18	(2) Female
			9-10. Age
4	2	2	(1) 18-19
16	13	16	(2) 20-29
26	19	11	(3) 30-39
20	19	3	(4) 40-49
8	7	3	(5) 50-59
			11. Where did you grow up? (Ages 5-17)
17	8	5	(1) Rural (farm or town less than 2,500)
7	13	6	(2) Town 2,500 to 25,000
38	34	22	(3) Urban (town larger than 25,000)
12	1	1	(4) More than one of the above
0	4	1	(X) No response
			12. Was that the only place you lived while growing up?
48	40	23	(1) Yes
8	8	8	(2) No, I lived in one other place
8	5	2	(3) No, I lived in two other places
7	4	2	(4) No, I lived in 3-5 other places
0	0	0	(5) No, I lived in 6-10 other places
3	0	0	(6) No, I lived in more than 10 other places
0	3	0	(X) No response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			13. How long have you been living in the Twin Cities?
4	2	1	(1) For less than 3 months
1	1	3	(2) For more than 3 months, but less than a year
7	6	2	(3) 1-3 years
7	5	3	(4) 4-6 years
7	4	2	(5) 7-9 years
48	40	22	(6) For ten or more years
0	2	2	(X) N/A; D/K; no response
			14. Is this your own home? (Home ownership)
5	10	6	(1) Yes
69	49	29	(2) No
0	0	0	(X) No response
	1		Reject
			15-22. Who lives there with you?
			15. Parents
18	11	12	(1) Yes
56	49	23	(2) No
			16. Siblings
13	2	9	(1) Yes
61	58	26	(2) No
			17. Spouse
7	11	9	(1) Yes
67	49	26	(2) No
			18. Your dependent children
11	13	12	(1) Yes
63	47	23	(2) No
			19. Other relatives
4	1	2	(1) Yes
70	59	33	(2) No
			20. Friend or roommate
2	9	3	(1) Yes
71	51	32	(2) No
1	0	0	(X) No response
			21. Other patients (subject still hospitalized)
5	6	3	(1) Yes
69	54	32	(2) No
			22. Other residents of boarding home or dormitory
15	14	6	(1) Yes
59	46	29	(2) No

Experimental    Control    UMH

Item

			23. Generally, are you satisfied with your living arrangements?
39	33	16	(1) Yes
29	24	14	(2) No
3	1	2	(3) Indifferent
3	2	3	(X) No response

			24-25. If you had a choice, where and with whom would you rather live?
26	23	14	24. (1) Stay where I am
3	3	1	(2) Home of family or relatives
6	6	2	(3) Own home
24	15	9	(4) Different apartment or room
2	1	2	(5) Different boarding home
3	1	0	(6) Hotel or club
0	0	0	(7) Back to hospital
3	1	1	(8) Other
7	10	6	(X) D/K; no response

24	19	6	25. (1) Alone
15	17	12	(2) With family or children
15	6	5	(3) With relatives or parents
11	5	5	(4) With friends
2	3	2	(5) Other
7	10	5	(X) D/K; no response

FAMILY BACKGROUND

			26. With whom did you live when you were growing up? (Check only one category)
3	6	3	(1) Mother only
3	0	0	(2) Father only
57	47	21	(3) Both parents
4	0	1	(4) Relatives
1	2	0	(5) Non-relatives
2	1	0	(6) Institution
4	4	3	(7) Two or more of the above categories
0	0	0	(X) No response

			27. Are your parents living now?
23	22	20	(1) Both living
16	17	6	(2) Father deceased
9	6	6	(3) Mother deceased
23	12	3	(4) Both deceased
3	3	0	(X) D/K; no response

			28. Was your father married more than once?
63	45	28	(1) No
7	10	4	(2) Yes, he was married twice
0	0	0	(3) Yes, he was married three times
0	0	0	(4) Yes, he was married four times
0	0	0	(5) Yes, he was married five or more times
4	5	3	(X) N/A; D/K; no response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			29. What was (is) your father's occupation? (dominant male figure: ages 5-16)
10	8	11	(0) Professional and managerial
7	11	2	(1) Clerical and sales
4	4	1	(2) Service occupations
13	9	6	(3) Agriculture, fishery, and forestry
18	8	8	(4) Skilled occupations
8	6	4	(6) Semi-skilled occupations
10	9	1	(8) Unskilled
4	5	2	(X) N/A; D/K; no response
			30. Father's income:
31	17	16	(1) Very steady
20	21	12	(2) Regular
13	14	3	(3) Irregular
1	1	2	(4) Absent
9	7	2	(X) N/A; D/K; no response
			31-32. How many years of school did he complete?
34	26	6	(1) 0-8
11	8	15	(2) 9-12
6	8	4	(3) 13-16
2	1	0	(4) 17-20
21	17	10	(X) D/K; no response
			33. Did he graduate?
35	21	19	(1) Yes
17	20	5	(2) No
22	19	11	(X) D/K; no response
			34. Has he ever been hospitalized or treated for emotional problems or alcoholism?
60	45	29	(1) No
3	6	1	(2) Yes, for emotional problem
4	4	2	(3) Yes, for alcoholism
7	5	3	(X) D/K; no response
			35. Does (did) he have a physical handicap or physical illness?
13	12	9	(1) Yes
53	41	25	(2) No
8	7	1	(X) D/K; no response
			36. Was your mother married more than once?
62	51	29	(1) No
10	4	4	(2) Yes, she was married twice
1	2	0	(3) Yes, she was married three times
0	0	0	(4) Yes, she was married four times
0	0	0	(5) Yes, she was married five or more times
1	3	2	(X) N/A; D/K; no response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			37. During your childhood, did your mother have any other job besides being a housewife?
38	37	21	(1) No
15	7	6	(2) Yes, a part-time job
14	12	4	(3) Yes, a full-time job
2	0	0	(4) Not applicable
5	4	4	(X) D/K; no response
			38. How many years did she work?
24	25	17	(1) Held no job
4	0	3	(2) Less than two years
7	2	3	(3) 2-5 years
3	0	0	(4) 6-10 years
8	10	4	(5) More than ten years
28	23	8	(X) N/A; D/K; no response
			39. Is she working now?
27	29	17	(1) No
14	11	10	(2) Yes
33	20	8	(X) N/A; D/K; no response
			40-41. How many years of school did she complete?
24	16	14	(1) 0-8
18	17	15	(2) 9-12
8	7	4	(3) 13-16
1	0	0	(4) 17-20
23	20	9	(X) D/K; no response
			42. Did she graduate?
32	25	15	(1) Yes
18	13	7	(2) No
24	22	13	(X) D/K; no response
			43. Has she ever been hospitalized or treated for emotional problems or alcoholism?
60	53	33	(1) No
7	3	1	(2) Yes, for emotional problems
0	1	1	(3) Yes, for alcoholism
7	3	0	(X) D/K; no response
			44. Does (or did) she have a physical handicap or physical illness?
18	9	10	(1) Yes
47	46	24	(2) No
9	5	1	(X) D/K; no response

Experimental   Control   UMH

Item

45. Do you have any brothers or sisters?  
(Number. Does not include patient)

4	7	7
19	11	5
9	13	10
12	6	2
8	11	4
8	6	1
2	4	0
5	0	0
1	0	0
4	2	0
0	0	0
0	0	0
3	0	2

0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12

46. Have any brothers or sisters ever been hospitalized or treated for emotional problems or alcoholism?

51	43	20
10	4	4
3	1	4
2	1	0
0	0	0
3	0	0
5	11	7

(1) No  
(2) Yes, one for emotional problem  
(3) Yes, more than one for emotional problem  
(4) Yes, one for alcoholism  
(5) Yes, more than one for alcoholism  
(6) Yes, two of the above categories apply  
(X) N/A; D/K; no response

47. Does (did) any of your sibs have a physical handicap or physical illness?

11	10	5
58	41	23
5	9	7

(1) Yes  
(2) No  
(X) N/A; D/K; no response

EDUCATIONAL BACKGROUND

48-49. How many years of school (academic) did you complete?

8	10	1
46	32	23
18	14	10
^	4	1
0	0	0

(1) 0-8  
(2) 9-12  
(3) 13-16  
(4) 17-20  
(X) D/K; no response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			50. Degree (Check highest attainment)
24	18	8	(1) No degree or diploma
3	3	0	(2) Some training such as apprenticeship or vocational school taken without attaining a high school diploma
16	11	13	(3) High school diploma only
24	17	7	(4) Some formal training in addition to high school diploma
1	0	0	(5) Associate in Arts
4	6	5	(6) Bachelor of Arts or Science
0	2	1	(7) Master of Arts or Science
0	1	0	(8) Professional degree (medicine, law, dentistry, etc.)
0	1	0	(9) Doctor of Philosophy
2	1	0	(0) Other
0	0	1	(X) D/K; no response
			51. Did you complete grade school? If not, why did you leave? (Check only the <u>one</u> most important reason.)
71	58	35	(1) Completed grade school
0	1	0	(2) Family pressure to leave
1	0	0	(3) Financial reasons
0	0	0	(4) To get a job
1	0	0	(5) Emotional problems
0	0	0	(6) Lack of interest
0	1	0	(7) Scholastic problems
0	0	0	(8) Hospitalization or illness for other than emotional problems
0	0	0	(9) Other
1	0	0	(X) D/K; no response
			52. What course did you take in high school?
41	34	27	(1) Academic (college preparatory)
13	6	6	(2) Commercial (business or clerical)
4	3	0	(3) Vocational or trade
1	3	0	(4) Other
15	14	2	(X) N/A; no response
			53. Did you graduate from high school? If no, why not? (Check only one item)
45	35	25	(1) Yes, graduated
2	1	0	(2) No, left because of family pressure
1	1	0	(3) No, left for financial reasons
2	2	4	(4) No, left to get a job
6	5	0	(5) No, left because of emotional problems
0	0	0	(6) No, left because of illness or hospitalization for other than emotional problems
1	0	0	(7) No, lack of interest
5	3	3	(8) No, scholastic problems
0	0	0	(9) No, left because of pregnancy



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4                    6                    3  
8                    7                    0

53.    Item  
(continued)

(0) No, left for other reasons  
(X) N/A; D/K; no response

54.    What was your major course of study?  
(College, undergraduate)

4                    5                    4  
2                    3                    4  
1                    3                    0  
2                    0                    0  
1                    3                    3  
5                    2                    1  
1                    2                    1  
0                    0                    0  
4                    0                    0  
45                  40                  15  
9                    2                    7

(1) Social science  
(2) Humanities and fine arts  
(3) Natural science  
(4) Engineering  
(5) Education  
(6) Business  
(7) Pre-professional  
(8) Semi-professional (x-ray tech, med tech)  
(9) Other  
(0) N/A (no college training)  
(X) D/K; no response

55.    Did you graduate? If no, why not?

4                    10                  6  
0                    0                    0  
3                    1                    2  
5                    1                    1  
4                    3                    2  
0                    0                    0  
  
0                    0                    1  
3                    2                    1  
1                    0                    0  
0                    2                    1  
54                  41                  21

(1) Yes, graduated  
(2) No, family pressure  
(3) No, financial reasons  
(4) No, to get a job  
(5) No, emotional problems  
(6) No, illness or hospitalization for other than emotional problems  
(7) No, lack of interest  
(8) No, scholastic problems  
(9) No, pregnancy  
(0) No, other reasons  
(X) N/A; D/K; no response

56.    Training in a trade, technical, business, or correspondence school?

35                  29                  22  
14                  6                    4  
10                  6                    2  
10                  12                  3  
0                    1                    2  
3                    5                    1  
2                    1                    1

(1) No  
(2) Yes, trade school  
(3) Yes, technical school  
(4) Yes, business school  
(5) Yes, correspondence school  
(6) Yes, more than one of the above types  
(X) D/K; no response

57.    Did you complete the course?

20                  17                  6  
6                    3                    1  
11                  9                    4  
  
37                  31                  24

(1) Yes, completed all courses started  
(2) Yes, completed at least one course  
(3) No, completed none of the courses started  
(X) N/A; D/K; no response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			58. What were your reasons for leaving?
0	0	1	(1) Family pressure
3	1	1	(2) Financial reasons
1	3	2	(3) To get a job
4	2	0	(4) Emotional problems
1	0	0	(5) Illness or hospitalization for other than emotional problems
1	1	1	(6) Lack of interest
1	3	2	(7) Scholastic problems
0	0	0	(8) Pregnancy
5	1	0	(9) Other reasons
58	49	28	(X) N/A; D/K; no response
			MARITAL BACKGROUND
			59. What is your marital status?
45	34	19	(1) Single
10	12	11	(2) Married
0	1	1	(3) Widowed
4	2	0	(4) Separated
15	11	4	(5) Divorced
			60. Number of marriages? (Or, have you ever been married?)
45	34	19	(1) Never married
21	21	14	(2) Once
5	4	2	(3) Twice
2	1	0	(4) Three times
1	0	0	(5) Four times
0	0	0	(6) Five or more times
0	0	0	(X) No response
			61. If single, do you date?
21	17	14	(1) Yes
34	26	10	(2) No
15	13	11	(3) Not applicable
4	4	0	(X) No response
			62-63. How many years of school did your wife/husband complete?
3	2	1	(1) 0-8
13	9	10	(2) 9-12
2	5	3	(3) 13-16
1	1	0	(4) 17-20
53	43	21	(X) N/A; D/K; no response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			64. Did he/she graduate?
7	7	7	(1) No
8	7	4	(2) Yes, with high school diploma
0	0	1	(3) Yes, with Associate in Arts
0	4	1	(4) Yes, with B.A. or B.S.
1	0	0	(5) Yes, with Professional degree (M.D., Ll.B., etc.)
0	0	0	(6) Yes, with M.A. or M.S.
0	0	0	(7) Yes, with Ph.D.
58	42	22	(X) N/A; D/K; No response
			65. Is your husband/wife employed? (Check only one category)
8	9	2	(1) No
6	5	9	(2) Yes
0	0	1	(3) Yes, primarily a student
60	46	23	(X) N/A; D/K; No response
			66. What is his/her job? (code number) (Use one-digit DOT classification)
3	0	0	(0) Professional & Managerial
1	1	4	(1) Clerical & Sales
2	3	1	(2) Service Occupations
0	0	0	(3) Agriculture, Fishery, Forestry
0	0	3	(4) Skilled Occupations
0	0	1	(6) Semi-skilled Occupations
0	0	0	(8) Unskilled Occupations
68	56	26	(X) N/A; D/K; No response
			67. How many hours per week does he/she work?
2	1	2	(1) Part-time
4	3	8	(2) Full-time
68	56	25	(X) N/A; D/K; No response
			68. Has he/she worked steadily since your marriage?
4	3	6	(1) Yes
5	6	5	(2) No
65	51	24	(X) N/A; D/K; No response
			69. Has your husband/wife been married previously?
17	17	13	(1) No
5	6	2	(2) Yes, once
1	1	0	(3) Yes, twice
0	0	0	(4) Yes, three times
0	0	0	(5) Yes, four or more times
51	36	20	(X) N/A; D/K; No response

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Item

INCOME

70. What is your total (individual) yearly income now?

34	34	20
28	18	6
6	4	3
0	1	1
0	0	0
0	0	0
6	3	5

- (1) Less than \$1,000
- (2) \$1,000-\$2,999
- (3) \$3,000-\$4,999
- (4) \$5,000-\$6,999
- (5) \$7,000-\$8,999
- (6) \$9,000 or more
- (X) D/K; No response

71. What is the total yearly income for your family, if married?

4	6	3
5	4	3
2	2	2
1	0	3
0	0	1
0	1	0
62	47	23

- (1) Less than \$1,000
- (2) \$1,000-\$2,999
- (3) \$3,000-\$4,999
- (4) \$5,000-\$6,999
- (5) \$7,000-\$8,999
- (6) \$9,000 or more
- (X) N/A; D/K; No response

72. What are the sources of your income?

3	6	7
21	12	2
16	14	10
9	15	0
15	17	14
11	6	2
10	4	2
13	8	4
2	1	0
3	2	2

- (1) Spouse
- (2) County Relief
- (3) Self
- (4) Agency Relief
- (5) Relatives
- (6) Pensions
- (7) Savings
- (8) Other
- (9) Social Security
- (X) D/K; No response

73. Is this income adequate to meet your needs?

36	27	13
37	27	19
1	6	3

- (1) Yes
- (2) No
- (X) D/K; No response

OUTSIDE ASSISTANCE

74. What services are you receiving? (Check as many as applicable)

7	9	1
18	16	29
10	3	2
11	10	2
35	32	4
27	24	2
1	0	0
29	24	11
1	1	0
0	1	1

- (1) Not seeing anyone for service
- (2) Psychotherapy
- (3) Vocational counseling
- (4) Job-finding assistance or placement
- (5) Casework and/or supervision
- (6) Financial assistance
- (7) Parole or probation officer
- (8) Medication and/or medical assistance
- (9) Other
- (X) D/K; No response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			75. How often do you see them?
9	10	25	(1) At least weekly
9	10	3	(2) At least bi-weekly
26	20	0	(3) About monthly
5	1	0	(4) At regular intervals of more than one month
8	2	2	(5) Occasionally
17	17	5	(X) N/A; No response
			76. How many different agencies have you been active with?
8	6	0	(1) 0
20	8	19	(2) 1
18	15	9	(3) 2
15	15	6	(4) 3
5	9	1	(5) 4
5	2	0	(6) 5
0	1	0	(7) 6
3	4	0	(X) D/K; No response
			SOCIAL HISTORY
			77. Do you belong to any clubs or social organizations now? If yes, how many?
16	16	6	(1) Yes, one
4	6	2	(2) Yes, two
0	0	2	(3) Yes, three
1	1	0	(4) Yes, four
0	0	0	(5) Yes, five or more
51	35	24	(6) No
2	2	1	(X) D/K; No response
			78-85. Which ones do you belong to?
			78. VFW and/or American Legion
3	1	0	(1) Yes
67	58	34	(2) No
4	1	1	(X) No response
			79. Circle F Club
8	10	3	(1) Yes
62	49	31	(2) No
4	1	1	(X) No response
			80. Church groups
6	8	6	(1) Yes
64	52	28	(2) No
4	0	1	(X) No response
			81. Social and/or recreational or youth groups (i.e. YMCA, etc.)
7	1	3	(1) Yes
63	57	31	(2) No
4	2	1	(X) No response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
0 70 4	4 55 1	0 34 1	82. Professional and/or political organizations (1) Yes (2) No (X) No response
0 70 4	0 59 1	2 32 1	83. Civic clubs (i.e. Rotary, JC's, Kiwanis, Lions, etc.) (1) Yes (2) No (X) No response
1 69 4	3 56 1	0 34 1	84. Informal social organizations (i.e. bridge clubs, card clubs) (1) Yes (2) No (X) No response
2 68 4	4 55 1	3 31 1	85. Other (1) Yes (2) No (X) No response
6 5 5 3 55	9 5 8 1 37	4 2 4 1 24	86. How often do you attend? (1) Regularly; at least one club meeting of some kind per week (2) About one to three meetings per month (3) Infrequently (4) Belong but never attend (X) N/A; No response
4 13 57	3 17 40	0 8 27	87. What do you do at these meetings? (1) Passive observer (2) Active participant (i.e. discussion groups, games, cards, etc.) (X) N/A; No response
15 0 4 55	17 1 4 38	8 0 2 25	88. Do you enjoy attending? (1) Yes (2) No (3) Indifferent (X) N/A; No response
22 6 18 13 10 5	17 8 18 5 4 8	7 3 10 8 3 4	89. Do you have many personal friends? (1) None (2) One (3) 2-3 (4) 5-10 (5) Over 10 (X) No response

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Item

			90.	How long have you known these friends? (Check longest length of time patient has known any one of these friends.) (1) Less than one year (2) 1-2 years (3) 3-5 years (4) 6-10 years (5) More than 10 years (X) N/A; No response
1	3	2		
4	4	4		
7	7	8		
8	12	2		
22	10	3		
32	24	16		
			91.	Do you see them regularly? (1) Regularly - at least once a week (2) About once or twice a month (3) Infrequently (4) Never (X) N/A; No response
16	8	9		
9	7	3		
20	22	8		
1	0	0		
28	23	15		
			92.	What things do you and your friends do together? (Check the activity which seems to be primary, or the one the client mentions first.) (1) Active participation in activities (i.e. bowling) (2) Observer (movies, TV, sports, etc.) (3) Drinking (4) Social interaction (i.e. conversation) (5) Other (X) N/A; No response
4	2	1		
5	1	4		
1	1	0		
29	27	15		
3	0	0		
32	27	15		
				RELIGIOUS ACTIVITIES
			93.	Do you go to a church? (1) Yes (2) No (X) No response
52	41	24		
20	19	10		
2	0	1		
			94.	What denomination is your church? (1) Protestant (2) Catholic (3) Jewish (4) Other (X) N/A; No response
42	32	19		
18	18	9		
0	1	1		
1	0	0		
13	9	6		
			95.	How often do you attend church services? (1) At least weekly (2) At least bi-weekly (3) About monthly (4) Only on infrequent occasions or holy observances (X) N/A; No response
28	21	11		
7	2	3		
1	0	1		
18	17	7		
20	20	13		



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Item

CRIMINAL AND LEGAL RECORD

19	10	5	96.	Have you ever been arrested?
53	47	30		(1) Yes
2	3	0		(2) No
				(X) No response
51	46	30	97.	Did you pay a fine or spend some time in jail? (excluding minor traffic violations)
6	3	0		(1) No
9	7	3		(2) Yes, paid a fine
3	1	1		(3) Yes, spent time in jail
5	3	1		(4) Yes, both
				(X) No response

PHYSICAL CONDITION

47	41	25	98.	Have you any complaints now about your physical health?
8	3	4		(1) No complaints or symptoms of physical disease or disability
17	8	6		(2) Organic elements comprise the major component underlying complaints - symptoms of physical disease or disability
2	6	0		(3) Organic elements are but a minor component underlying complaints or symptoms of physical disease or disability
0	2	0		(4) Organic basis for complaints or symptoms of physical disease or disability no longer, if ever, present
				(X) No response
30	19	13	99.	Have you had any serious physical illnesses in the past?
42	35	21		(1) Yes
2	6	1		(2) No
				(X) No response

VOCATIONAL HISTORY

Military History

24	17	4	100.	Are you a veteran?
50	43	31		(1) Yes
0	0	0		(2) No
				(X) No response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			101. If a veteran, how long were you in the service?
2	0	0	(1) Less than 3 months
1	1	0	(2) 3-6 months
3	2	1	(3) 7-12 months
5	4	1	(4) 13-24 months
7	5	1	(5) 25-36 months
6	4	1	(6) Over 36 months
50	44	31	(X) N/A; D/K; No response
			102. Did you receive any special training or attend any service schools?
10	9	4	(1) Yes
14	7	0	(2) No
50	44	31	(X) N/A; D/K; No response
			103. What type of discharge did you receive?
10	10	3	(1) Honorable, non-medical
9	5	0	(2) Honorable, medical for psychiatric reasons
3	0	0	(3) Honorable, medical for non-psychiatric reasons
1	0	0	(4) Dishonorable (or, without honor)
51	45	32	(X) N/A; No response
			104. Do you have any service-connected disability?
12	7	0	(1) Yes
17	12	6	(2) No
45	41	29	(X) N/A; D/K; No response
			Job History
			105. Are you working now?
4	8	3	(1) Yes
70	52	32	(2) No
			106. What kind of work are you doing now? (One digit DOT classification)
0	1	0	(0) Professional & Managerial
2	1	2	(1) Clerical & Sales
2	4	1	(2) Service occupations
0	0	0	(3) Agriculture, fishery, forestry
0	0	0	(4) Skilled occupations
0	2	0	(6) Semi-skilled occupations
0	0	0	(8) Unskilled occupations
70	52	32	(X) N/A; D/K; No response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			107. How many hours per week do you work? (Full-time = 35 hours or more per week)
2	4	1	(1) Full-time
2	4	2	(2) Part-time
70	52	32	(X) N/A; D/K; No response
			108. What was the last job you held?
5	5	4	(0) Professional & Managerial
28	23	16	(1) Clerical & Sales
17	11	4	(2) Service occupations
0	1	0	(3) Agriculture, fishery, forestry
3	4	1	(4) Skilled occupations
8	4	3	(6) Semi-skilled occupations
11	7	6	(8) Unskilled occupations
2	5	1	(X) N/A; D/K; No response
			109. When did you last work?
18	15	16	(1) Less than 6 months ago
13	7	4	(2) 6-11 months ago
21	12	10	(3) 1-3 years ago
8	8	2	(4) 4-6 years ago
4	2	1	(5) 7-9 years ago
5	9	0	(6) 10 or more years ago
5	7	2	(X) N/A; D/K; No response
			110. How many hours per week did you work?
53	44	29	(1) Full-time
15	9	4	(2) Part-time
6	7	2	(X) N/A; D/K; No response
			111. What was your reason for leaving this job? (Check only the one most important.)
26	20	17	(1) Emotional problems (includes hospitalization)
5	1	0	(2) Physical illness (includes hospitalization)
3	6	2	(3) Disliked working conditions
6	3	1	(4) Trouble with co-workers or supervisor
1	3	0	(5) Dissatisfied with pay
8	7	4	(6) Laid off
7	4	1	(7) Fired
9	6	6	(8) Other
9	10	4	(X) N/A; D/K; No response
			112. What was the longest job you ever held?
8	9	2	(0) Professional & Managerial
23	21	20	(1) Clerical & Sales
10	9	4	(2) Service occupations
1	1	0	(3) Agriculture, fishery, forestry
4	5	3	(4) Skilled occupations
11	5	2	(6) Semi-skilled occupations
13	8	3	(8) Unskilled occupations
4	2	1	(X) N/A; D/K; No response

<u>Experimental</u>	<u>Control</u>	<u>UMH</u>	<u>Item</u>
			113. How long were you on that job?
11	9	8	(1) Less than one year
31	22	12	(2) 1-3 years
11	14	7	(3) 4-6 years
4	6	3	(4) 7-9 years
8	6	2	(5) 10 or more years
9	3	3	(X) N/A; D/K; No response
			114. How many hours per week did you work?
59	52	30	(1) Full-time
7	5	2	(2) Part-time
8	3	3	(X) N/A; D/K; No response
			115. Why did you leave this job?
19	16	12	(1) Emotional problems (includes hospitalization)
4	2	4	(2) Physical illness (includes hospitalization)
3	6	3	(3) Disliked working conditions
3	5	1	(4) Trouble with co-workers or supervisor
1	1	2	(5) Dissatisfied with pay
9	3	2	(6) To take a better job
6	5	0	(7) Laid off
4	4	2	(8) Fired
12	11	5	(9) Other
13	7	4	(X) N/A; D/K; No response
			116. Have you had promotions in your jobs?
19	16	17	(1) Yes
47	38	13	(2) No
8	6	5	(X) N/A; D/K; No response
			117. Did your supervisor ever move you from one job to another within the same company?
21	19	19	(1) Yes
42	32	11	(2) No
11	9	5	(X) N/A; No response
			118. Have you ever supervised other workers?
17	16	10	(1) Yes
50	39	20	(2) No
7	5	5	(X) No response

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